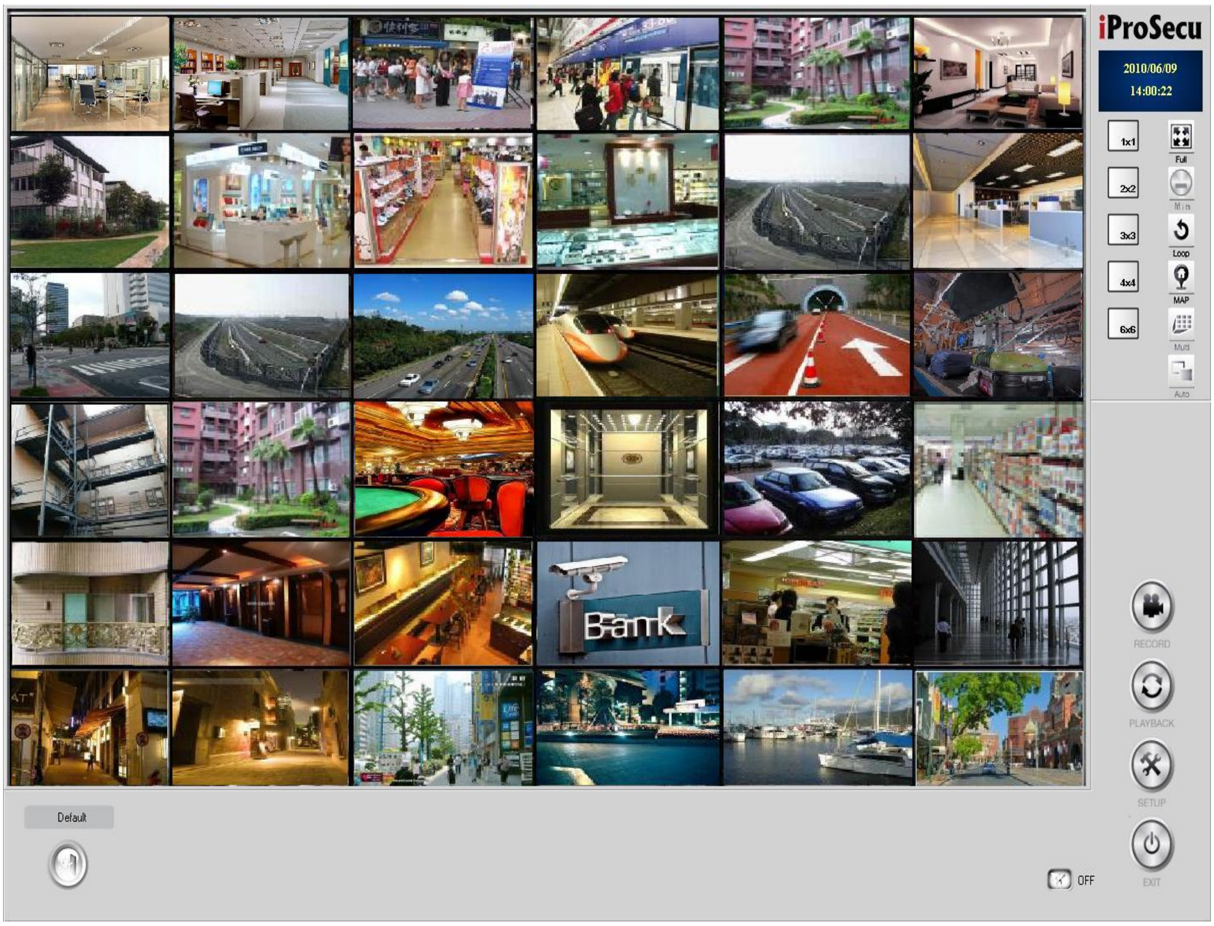
User’s Manual

Network Recording Software



VERSION 1.0 ENGLISH

INDEX

I. Preface

Network Recording Software series (includes 4,9,16, 36 and 72 channels) is a video recording software which supports IP Camera, Video Server and Digital Video Recorder. People use Network Recording Software to monitor the real-time video, record the video on PC then play the recorded video when necessary.

Network Recording Software series support 5 different ways to record the video which is including normal recording, schedule recording, motion-triggered recording, alarm-triggered recording and manual recording. In addition, E-Map, Intelligent video analytics, Multi-Monitor are the build-in functions to make Network Recording Software handy.

Through activating the function of Web server, 3GPP server and remote AP server, Network Recording Software provides web browser, 3G mobile phone, remote program and remote Lite program for user's demand.

II. System Requirements

A. Minimum requirements

i. CPU: Intel Pentium 4 2.0G
ii. Memory: 1GB
iii. VGA card: 128MB External Graphic Card or above
iv. Monitor Resolution: 1024 x 768 (Min.)
v. OS: Windows Server 2003 / Windows 2000 / XP / Vista / Win7
vi. File System: NTFS*
(*Network Recording Software still can operate in FAT32 file system. However, it will waste much time while set up the volume of hard disk and it is worse when write the recording data into the hard disk. Therefore, FAT32 file system is not suggested to use.)

B. Suggested requirements

i. CPU: Intel Core 2 Quad Q6600 or above
ii. Memory: 2GB
iii. VGA card: 512MB External Graphic Card or above
iv. Monitor Resolution: 1024 x 768 (Min.)
v. OS: Windows Server 2003 / Windows 2000 / XP / Vista / Win7
vi. File System: NTFS

III. Program Install and Uninstall

A. Program Install

i. To install NETWORK RECORDING SOFTWARE, please double click .

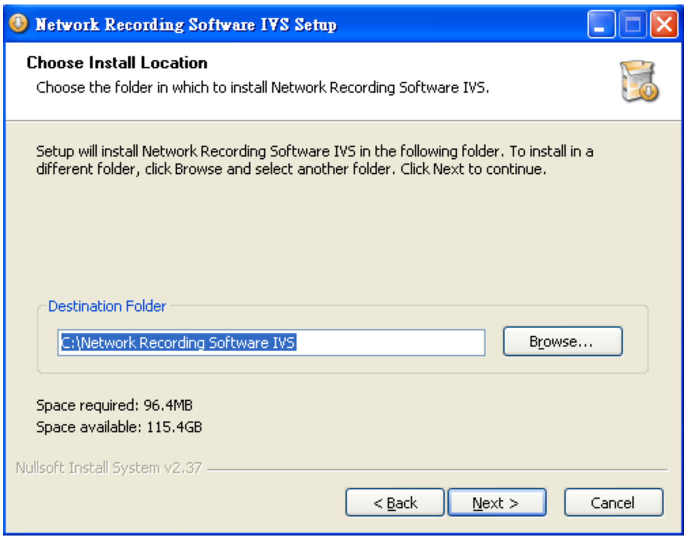
ii. Please select the language you would like to use. For the moment, Network Recording Software supports "Danish" , "English" , "French" , "German" , "Italian" , "Japanese" , "Polish" , "Portuguese" , "Russian" , "Simplified Chinese" , "Spanish" , "Traditional Chinese".



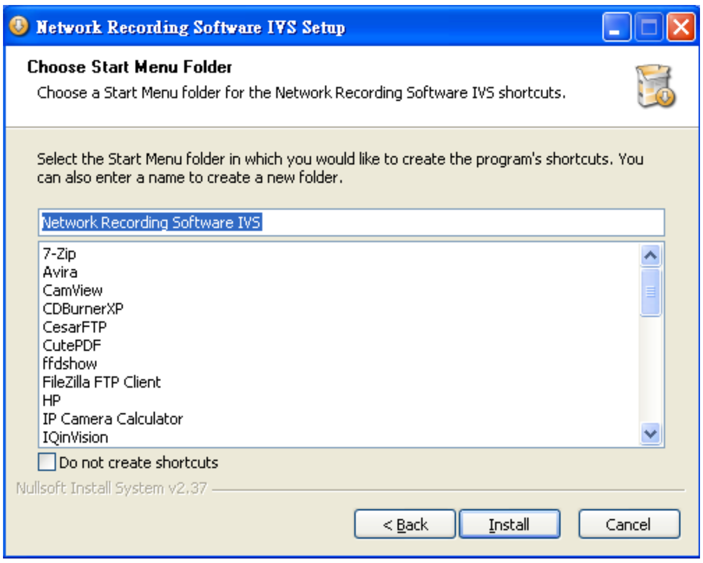
iii. License Agreement. Select "Accept"，Go to the next step.



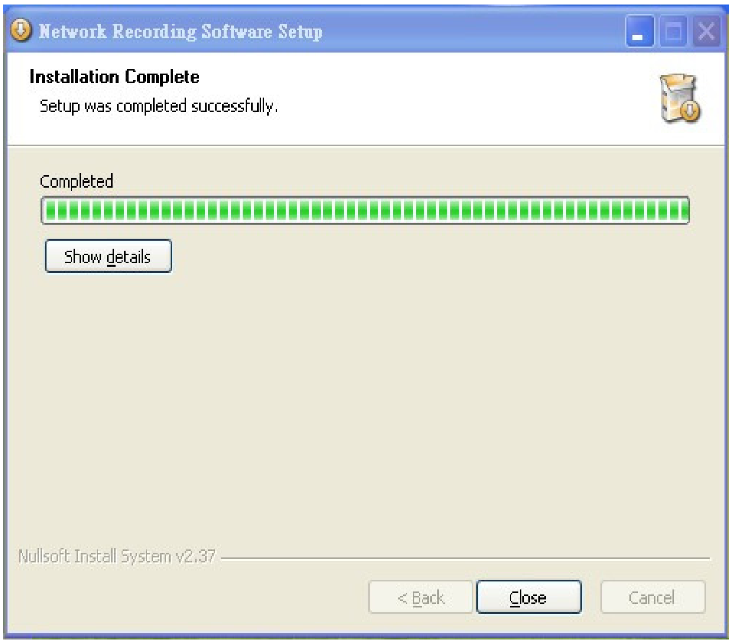
iv. Select the directory for NETWORK RECORDING SOFTWARE. The default directory is "C:\Network Recording Software ".Select "Next".

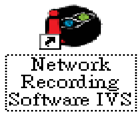


v. Set up the name of the program folder. The default is "Network Recording Software". Click "Install" to start the installation.



vi. When finish, click “Close” to close the procedure of the installation.



vii. To start the program, select “Start” →”Program”→””Network Recording Software IVS ”→”Network Recording Software IVS ”. 

NOTE : In Windows Vista / Windows 7 OS, please right-click on the desk short cut or the main program, select “Run as administrator” to start the program.

viii. Type in default user name: **admin** and password: **admin** and log in the system.



ix. Please refer to following example which is based on 72CH Network Recording Software.



x. Additional monitor screen might be seen if second monitor is connected.

xi. In the Network Recording Software series, the first and the second live-viewing screens are similar, but the number of the channels displayed on the screen might be different.

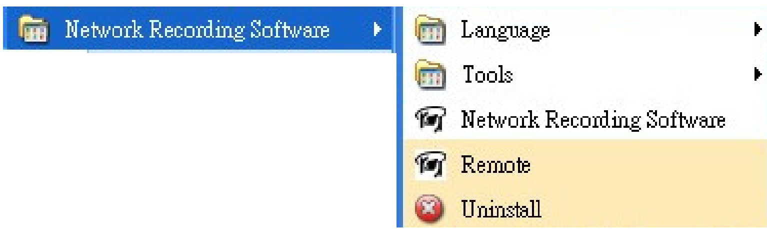
xii. If multi-monitor is not supported by PC, the multi-monitor mode 

and the multi-monitor ON/OFF 

will be inactivated.

B. Uninstall

i. To uninstall the program, select “Start” → ”Program” →”Network Recording Software ”→”Uninstall” to remove the program.



IV. KeyPro (USB Dongle)

KeyPro is a USB dongle provided for display protection. By connecting KeyPro to USB slot, KeyPro will attach to recording software to perform display protection. The following figure shows the image after installing KeyPro properly.



Without the KeyPro, recording software will not display the image or video properly as following figure. In Windows Vista, please right-click on the desk short cut or configure tool, then select “Run as administrator” to start the program.



Note: By reconnecting KeyPro and restarting the recording software, image or video will be displayed properly.

V. Set up front-end device & HDD

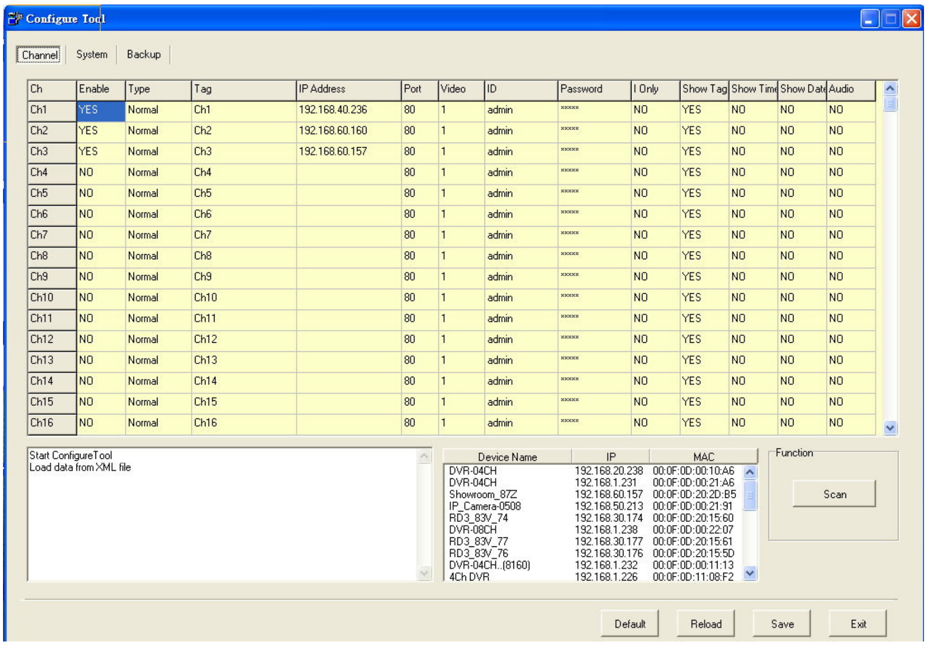
To start recording, please set up the IP camera/ Video server & HDD.

A.Set up IP Camera/ Video Server / Digital Video Recorder

There are 2 ways to set up the IP Camera/ Video Server

i. Configure Tool

a. Select "Start"→ "Program" → "Network Recording Software " → "Tools"→ "Configure tool". In Windows Vista, please right-click on the desk short cut or configure tool, then select "Run as administrator" to start the program.



b. "Configure tool" integrates "IP Installer". When start "Configure tool", it will search IP camera & video server automatically. To re-search the device, please click "Scan IP".

c. Select the IP camera/ video server you would like to add. Drag-and-drop to the video channel listed above. Then type the username & password of the device.

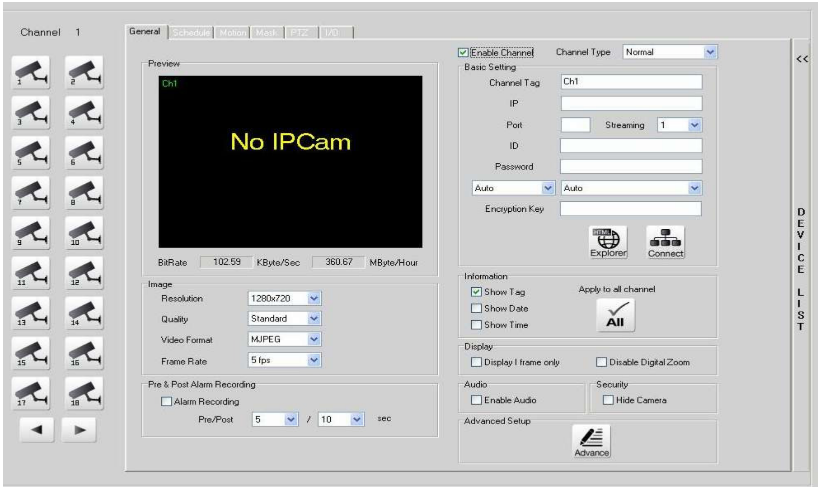
d. When finish the configuration, click "Save" to save all the information.

ii. Setup IP camera/ video server in the administration page

a. Select 

to enter IP camera/ video server set up page.

Note: The following examples are base on 72CH Network Recording Software.



b. There are 18 channels listed on the left side of the administrator page. Users can use   to select 1-18,19-36, 37-54,55-57 channels. In addition, users can use either keyboard to enter the setup values or by using the mouse to click 

and active the virtual keyboard to configure each channel.



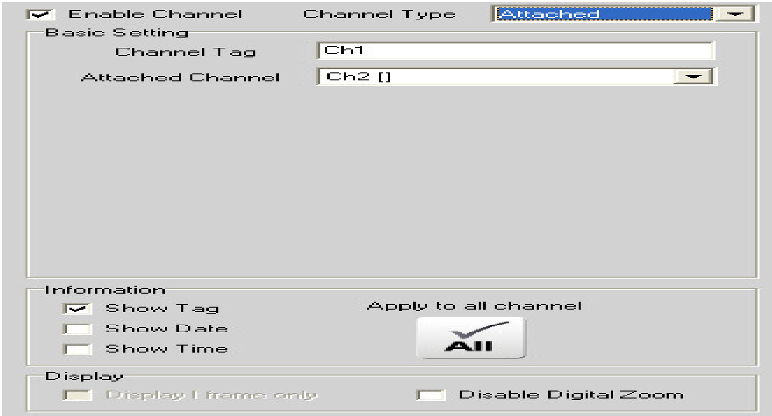
c. Camera can be configured in the general setup page. First, click 

to enable each channel and to set each camera.

d. Please select channel type (Normal or Attached):

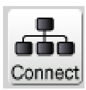
Normal: The same as the main setup page.

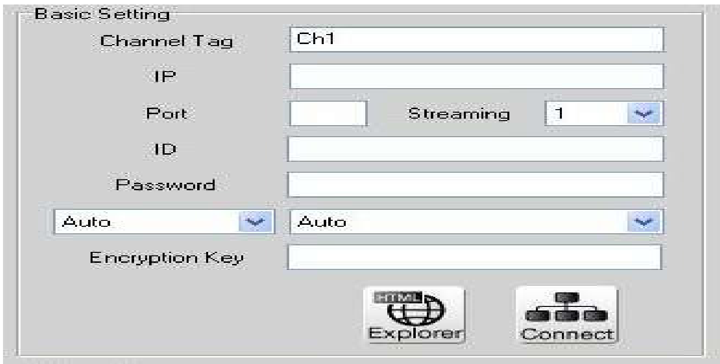
Attached: If user selects one channel (ex. CH2) as attached channel type, then user is capable to attach one different channel (ex CH1) to CH2. It will result CH2 is the same as CH1. Also, CH2 is not physically linked to any camera; therefore, CH2 will not cost any loading of camera.



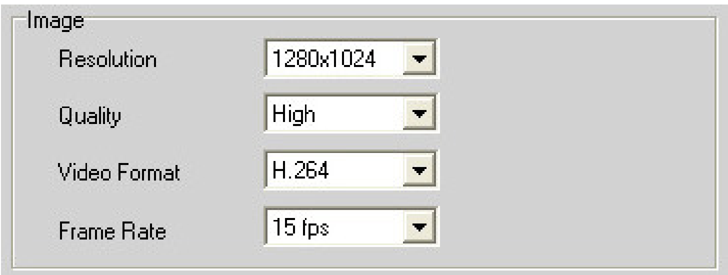
Application of attached channel: Attached channel type can operate with the digital zoom function. User can select different spots in the main channel and attach to different attached channels. Because attached channel type is not physically linked to any camera; therefore, such channel will not cost any loading of camera or HDD space. For instance, the following figure shows that CH2, 3 and 4 is only apart of the CH1.



e. In the basic setting as showed below, channel name can be saved in the "Channel Tag" to distinguish each channel. IP address is indicating the channel. With IP Share (Router), the Port needed to be adjusted in case of conflict. Fill in the ID and the Password for each channel, then click  to connect each device or channel. Click  will enable IE to browse each channel.



f. Within the Image setup page as showed below, users can change image Resolution, Quality, Video Format, and Frame Rate.



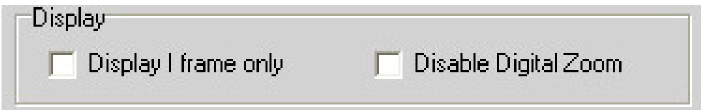
g. In the Pre & Post Alarm Recording setting page as showed below, users can change the recording time interval.



h. In the Information setting page as showed below，Tag / Date / Time can be displayed on the live viewing。



i. In the Display setting page as showed below，users can select display mode.



When “Display I frame only” is checked, only one I-Frame will be transferred and displayed in live-viewing ; Enabling “Disable Digital Zoom” causes live-viewing to display the original image size (as showed below).



j. In the Audio setting as showed below，click "Enable Audio" to enable audio recording.



k. In the Security setting page as showed below, click "Hide Camera" to hide camera images from live-viewing.



l. Before exiting administration page, remember to click 

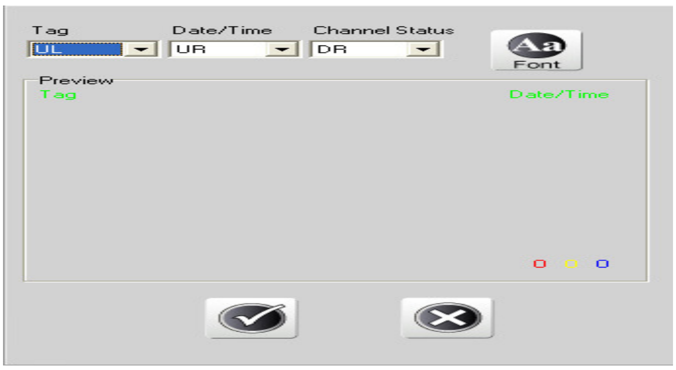
to save all the configurations.

m. Moreover, in Advanced Setup, click 

to setup the tag, Date /Time and status location of each shown channel. Click 

within advanced setting can setup such as the size, format and color of tag, Date/Time and status.

NOTE: The advanced setting will apply to all shown channels.



B.Set up HDD to record the video

To record the video on PC, HD space is better to be set first. Or, IPCamera Recorder will perform the record by the default setting (Based on the HD space).

i. Start the program, enter administration page and click Disc button to the disk setup page.

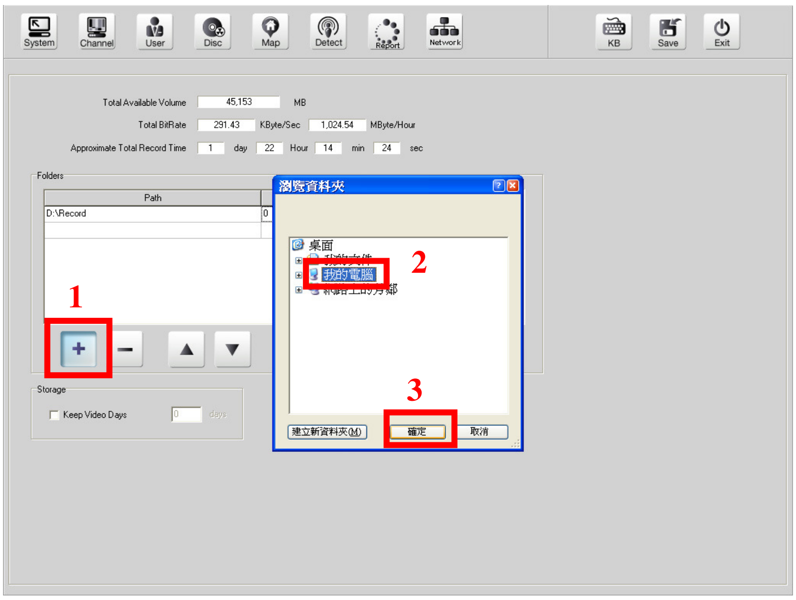
ii. Before the space is set, the default setting path is the folder, Record, which the software installed. Moreover, the default setting of available data storage quantity is No Limitation.

Path	Used(MB)	Free(MB)	Available(MB)	ReadOnly
C:\Program Files\IPCamera Recorder\Record	0	3,489	No Limitation	N
		0	No Limitation	N

a. If the new recording path would be added, click + button to add the new recording path. In contrast, click − button to delete the recording path.

b. To add the new recording path, click + button first.

c. Then, use the mouse to select the path and click OK button to complete the setting. The image is shown in the following,



d. After complete the new recording path setting, click ▲ / ▼ (Up and Down) to select the sequence of the recording path. While the disk space of the priority path is full, the recorded data will be reserved in the next path.

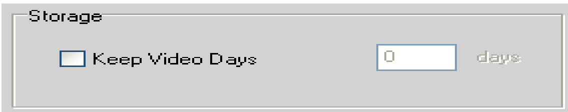
e. To mount the available space, click the data recording path first. Then, click ▲/ ▼ of the "Available (MB)" to mount the space. Moreover, use the keyboard can mount the space as well.

Path	Used(MB)	Free(MB)	Available(MB)	ReadOnly
D:\IPCamera Recorder\Record	961	4,243	1,024	N
		0	No Limitation	N

f. Finally, click Save to reserve all the settings.

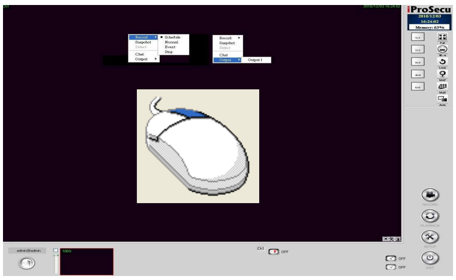
iii. RESERVE DAY：

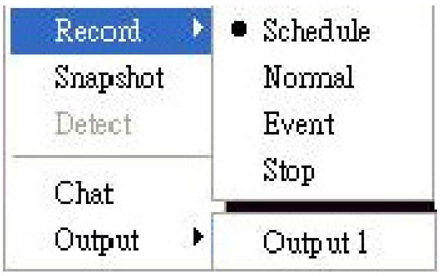
You can setup the keep video days, the data will be keep on the storage and based on your setting.



iv. Snapshot：

When you "Right click" on the live-viewing display choice as snapshot Function, it will be save into directory as setting.







VI. Live Video Monitoring

i. NETWORK RECORDING SOFTWARE series support different kinds of real-time monitoring mode. Please refer to following example for different versions depending on different channels.

a. 4 Channel version：Switchable 4CH 、1CH and multi-monitor (1CH each).

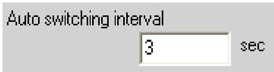
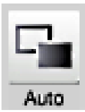
b. 9 Channel version：Switchable 9CH 、4CH 、1CH 、and multi-monitor (4CH each).

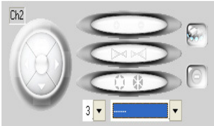
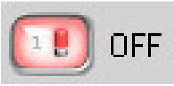
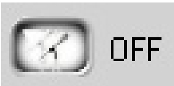
c. 16 Channel version：Switchable 16CH 、9CH 、4CH 、1CH 、8CH 、13CH and multi-monitor (8CH each).

d. 36 Channel version：Switchable 36-CH, 16-CH, 9-CH, 4-CH, 1-CH, and multi-monitor (16CH each).

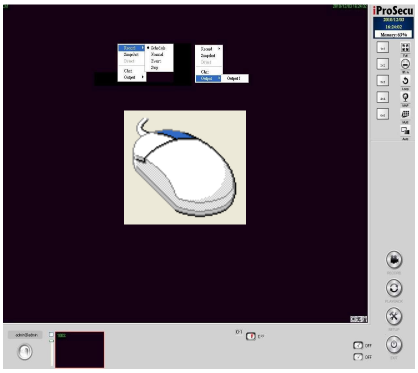
e. 72 Channel version：Switchable 36-CH, 16-CH, 9-CH, 4-CH, 1-CH, and multi-monitor (16CH each).

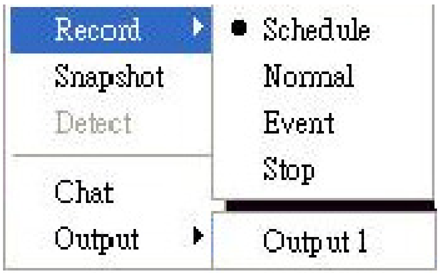
ii. ICON functions：

	Full Screen mode: To exit the full screen mode, use “Esc” or Right-click the mouse.
	Minimize the program.
	Auto switching channel. Users can set switching time interval ，and determine the initial screen split value .
	Get into E-Map.
	Enable/disable multi-monitor.
	Auto arrange for dual monitors
	Manual recording: To start recording immediately. To stop recording, click the button again.
	Recorded video playback.
	Get into administration page.
	Close the program
	It shows the status of each channel. ：Indicate the video recording status. ：Indicate Motion Detection. ：Indicate Alarm status.

	PTZ controller interface：Provides Focus、Zoom、IRIS、Auto/ Stop Patrol and Preset Point control.
	Digital Zoom Control Panel：After selected the channel, the extra image zoom window will be displayed to control the digital zoom in/out.
	I/O switch：There are up to 4 I/O controls. (if remote device supported)
	Chatting switch：On/Off 2-way audio (if remote device supported).
	Broadcast switch：On/Off broadcast function (if remote device supported).

iii. “ Right click” on the camera screen and get the “On Screen Menu”, from which you can quickly adjust the setting of camera. Snapshot save file setup in the “Disk” function.



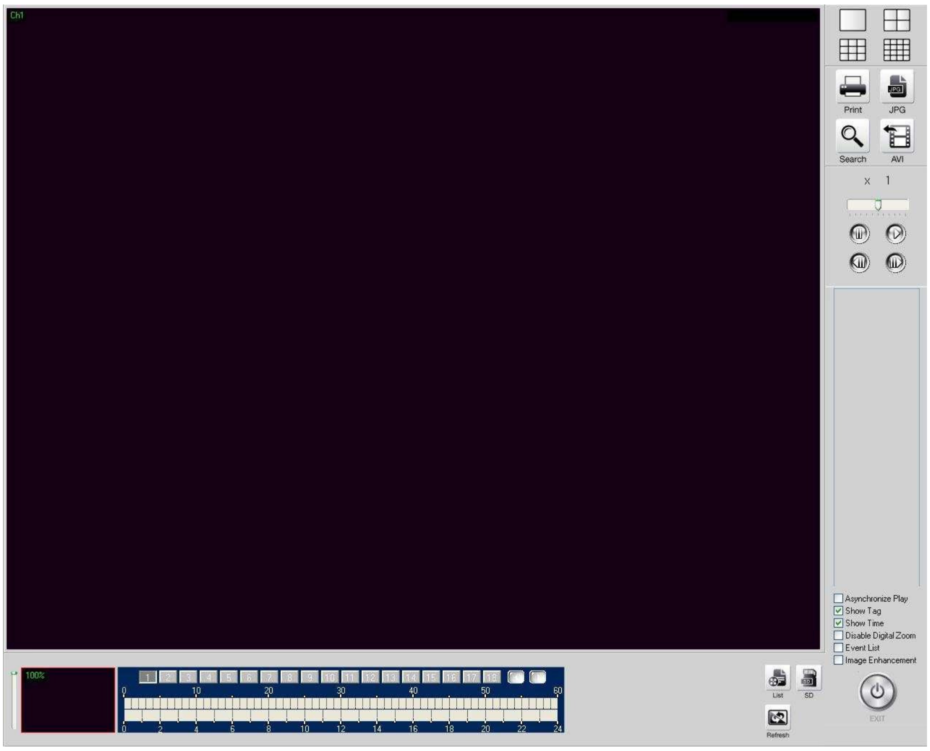


VII. Video Playback

Click 

to enter video playback mode.

Note: The following example is based on 72CH Network Recording Software.

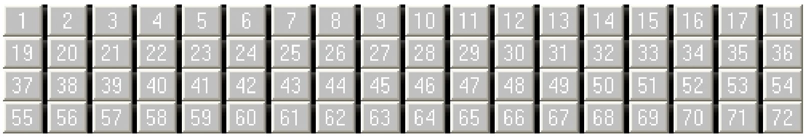


A. Video Playback

i. Use calendar to select the date. As shown in the following figure, the "day" means there are recorded videos in that day. For example, there are videos in 2010/05/24.



ii. After selecting the date, please click  to select the video channel you would like to play (72CH version).



NETWORK RECORDING SOFTWARE series support different kinds of real-time monitoring mode. Please refer to following example for different versions depending on different channels.

I. 4 Channel version：Switchable 4CH and 1CH playback mode.

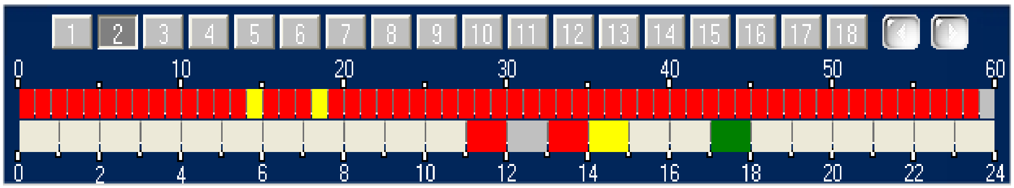
II. 9 Channel version：Switchable 9CH, 4CH and 1CH playback mode.

III. 16 Channel version：Switchable 16CH, 9CH, 4CH and 1CH playback mode.

IV. 36 Channel version：Switchable 16CH, 9CH, 4CH and 1CH playback mode.

e. 72 Channel version：Switchable 16CH, 9CH, 4CH and 1CH playback mode.

iii. When choose the date and video channel, it will show the recording status.



a. No color: No video data.

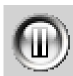
b. Red: Normal recording data.

c. Yellow: motion-triggered recording data.

d. Blue: Alarm-triggered recording data.

e. Gray: the time you choose to play.

f. Green: Detect triggered recording data.

iv. Click  to start playback. Click  to pause it

v. Use   to fasten the speed. 1x, 2x, 4x, 8x, 16x and 32x available (depends on the hardware and total channels).

vi. Use   to go to previous/ next frame.

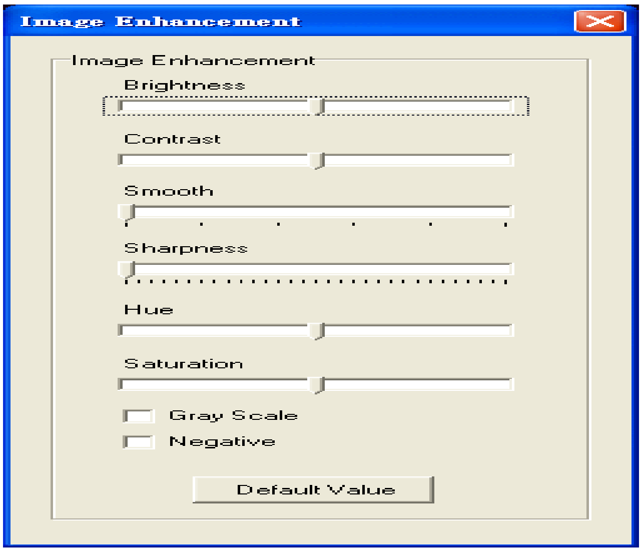
vii. Check “Asynchronies Play” to enable different time and channel playback.

viii. Check “Show tag”, “Show time” to show title & time on each channel.

ix. Check “Disable Digital Zoom” to see the original size of the video.

x. Check “Event List” to see the event records.

xi. Check “Image Enhancement” will pop up the following window. User can adjust “Brightness”, “Contrast”, “Smooth”, “Sharpness”, “Hue”, “Saturation”, “Gray Scale” and “Negative” eight options.

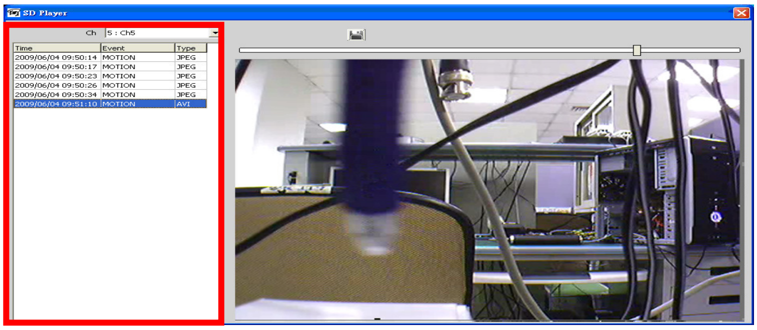


xii. SD Card Playback

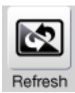
While the selected IP-CAM which is equipped SD card, the 

button will become enable to click. After click 

button, the following image will be revealed,



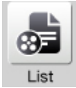
The left hand side of above window presented all the information which is reserved in the SD card, such as time, event and recording type (JPEG/ JPEGs/ AVI). Moreover, click  button can save as the playback item.

xiii. Click 

to refresh the recording time.

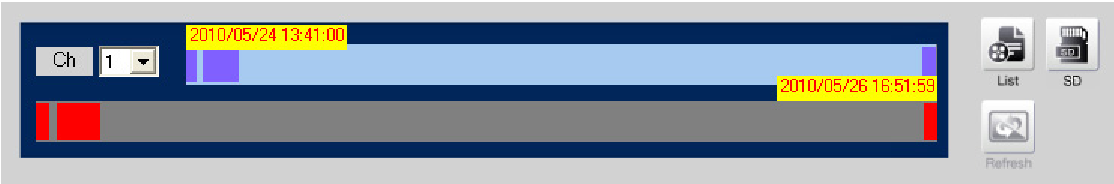
B. Time Spanned Video List

User could create video list according to time span selected in Playback.

Launch "Playback" first and press 

to start Video List playback mode.

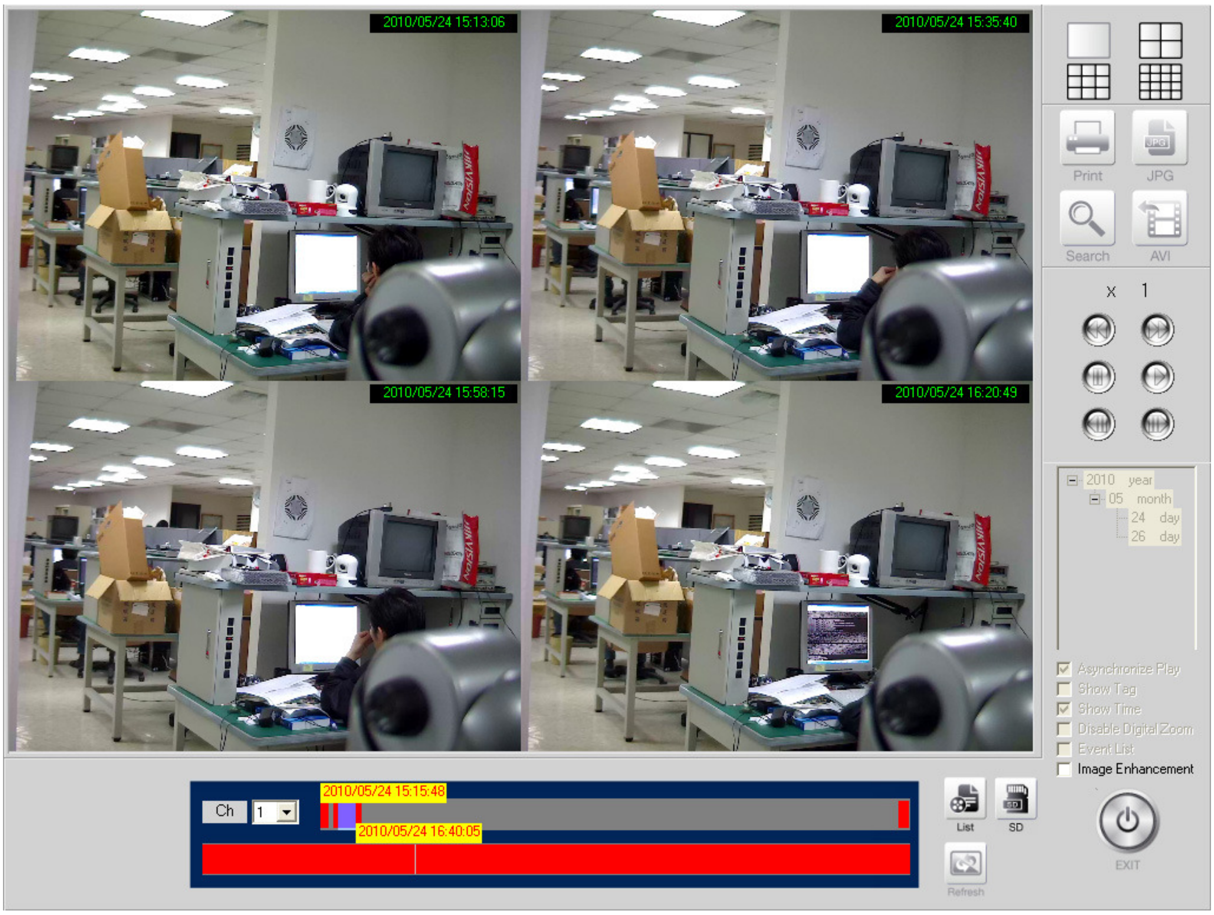
i. System will auto select the whole time range with recording when starts. For example, we have video recorded since 2010/05/24 13:41 to 2010/05/26 16:51 as shown below.



ii. The upper bar means "total recording status" and current time span "under displayed". The lower bar means "total time spanned recording status" that is under displayed and split into 4 segments as default.



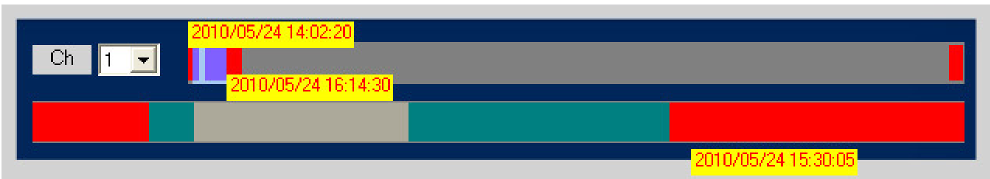
Time span under displayed is from "2010/05/24 15:15:48" to "2010/05/24 16:40:05".
"Red bar" denotes time segment with recording. Those segments without recording will be displayed as "Gray bar".



Channel 1's video splits into 4 segments now

The first video locates at "15:13:06" and the second locates at "15:35:40". Their difference in time stamp is about 22 minutes which is a 1/4 spanning from the beginning 15:15 to the ending 16:40.

iii. Use could change this "time range's starting time" by dragging between the upper bar or select "smaller time range" by dragging between the lower bar.

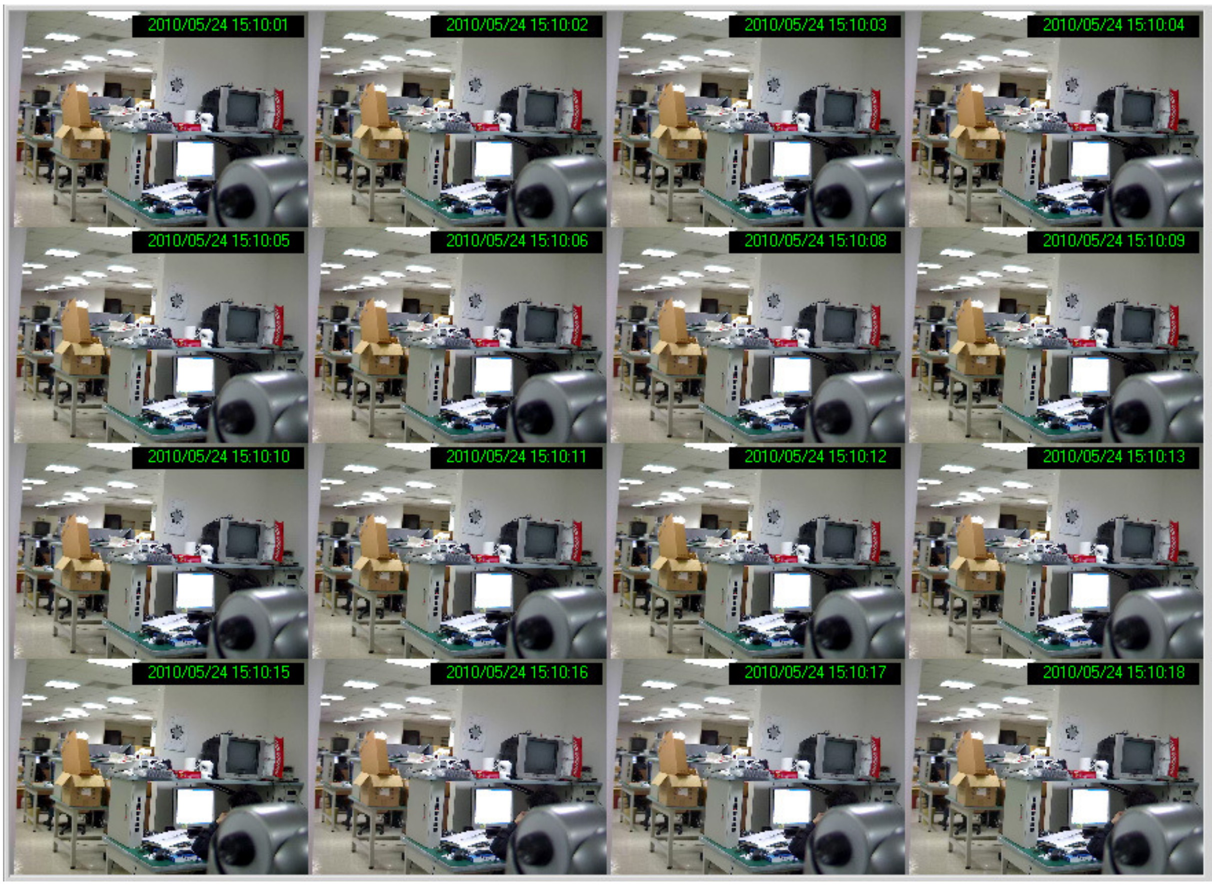


Select a smaller area from 14:26 to 15:30.



New time range being spanned.

iv. Press NxN button will split video into “average” NxN segments according current time spanned.



16 segments in time spanning

v. Click into one video block will automatically expand the time span according to its time stamp and next block's time stamp.



The first one is 15:23:20 and its next one is 15:40:53.



Click on the first video and spanning from 15:23:20 to 15:40:53

The time difference is now about 17/4 = 4.5 minutes.

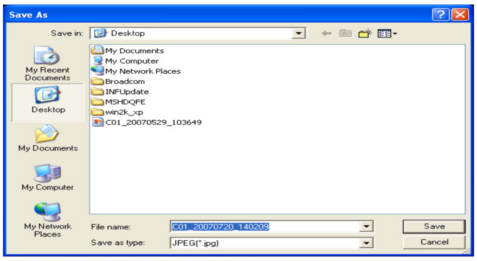
vi. Player will start playing it if video segment under spanned is too small to span again.

C. Export Video

Video data can be export as JPG or AVI format.

i. Export as JPEG format:

a. Click . It will show the following dialogue box.

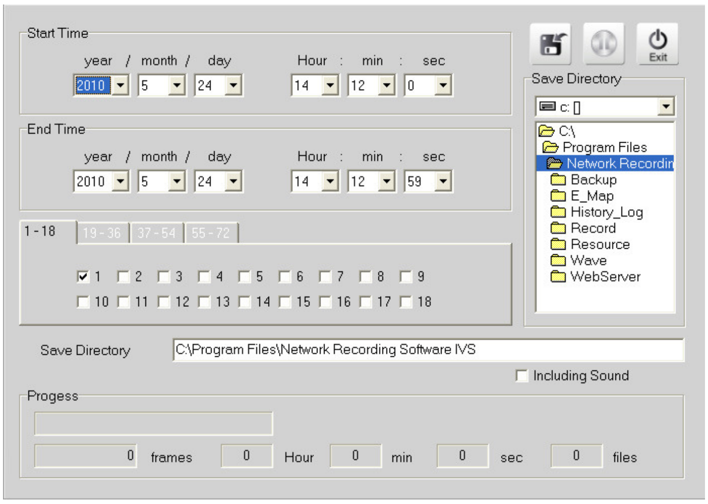


b. The filename will be “channel number_yyyymmdd_hhmmss.jpg”.

ii. Export as AVI format

a. Click . It will show the following dialogue box.

Note: The following figure is based on 72CH Network Recording Software version. Different version may have different layouts.



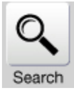
b. Select “start time”, “end time”, “video channel”, and the directory to save the video. Click  to start the procedure.

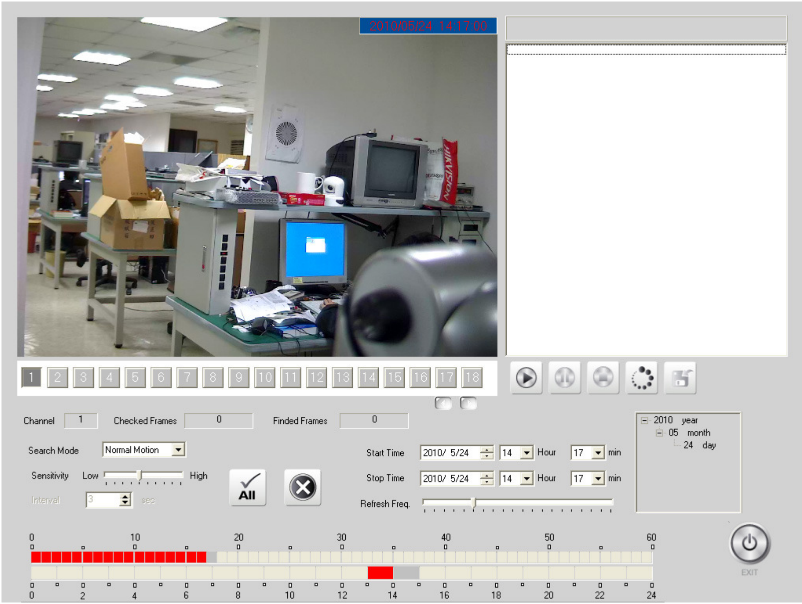
c. To record voice, please check “including Sound”.



d. It exports the video into different AVI files for each channel if multi-channel have bee selected.

D. Smart Search

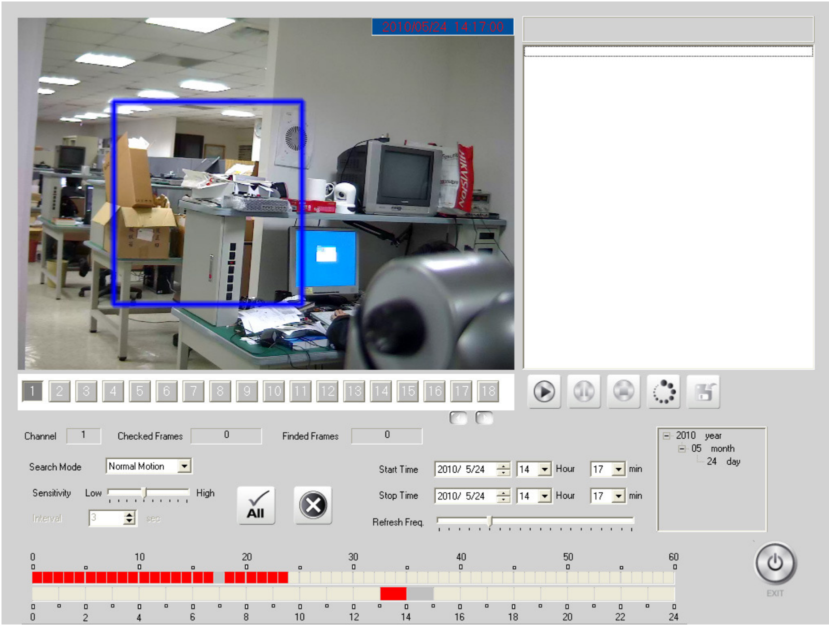
i. Click  to get into smart search page. The following example is based on 72CH version.



ii. Click   to switch 1-18, 19-36, 37-54, 55-72 channels. (72CH Version)



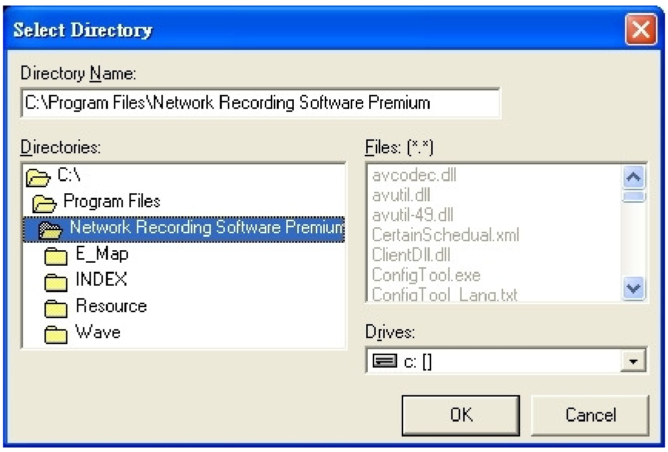
iii. Use mouse to drag and determine the searching area. Determine the detecting sensitivity and starting/ending time. Click  to start searching. During searching time, users can change refresh frequency by adjusting Refresh Freq. Bar. Please see following figures:



iv. The searching result is showed on up-right of the smart search page. Select each section to playback each event.



v. Use mouse to select one or more records then click  or right click the mouse to active following figure. Select directory to save record.



VIII. Digital Zoom

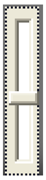
By enabling the digital zoom function, user can zoom in/out the image to get proper view. Digital zoom can be functionalized in live-viewing, playback viewing, second live-viewing and remote program. The following figures refer to the digital zoom panel.



There are there parts of the digital zoom panel.

i. 

Preview window: The image or video in the preview window is not live, the image frame will be updated within a time interval. The red frame indicate the live-viewing window, and the number of the left-down corner indicate the zooming rate.

ii.  Digital zooming bar: By moving the control bar up or down, the live-viewing and preview window will be zoomed in or out. The zoom rate is from 100% to 1000%.

iii.  Zoom status: By un-check this function, the image or video will be displayed in the original size.

The default of the digital zoom is enabled. User can change the default by clicking 

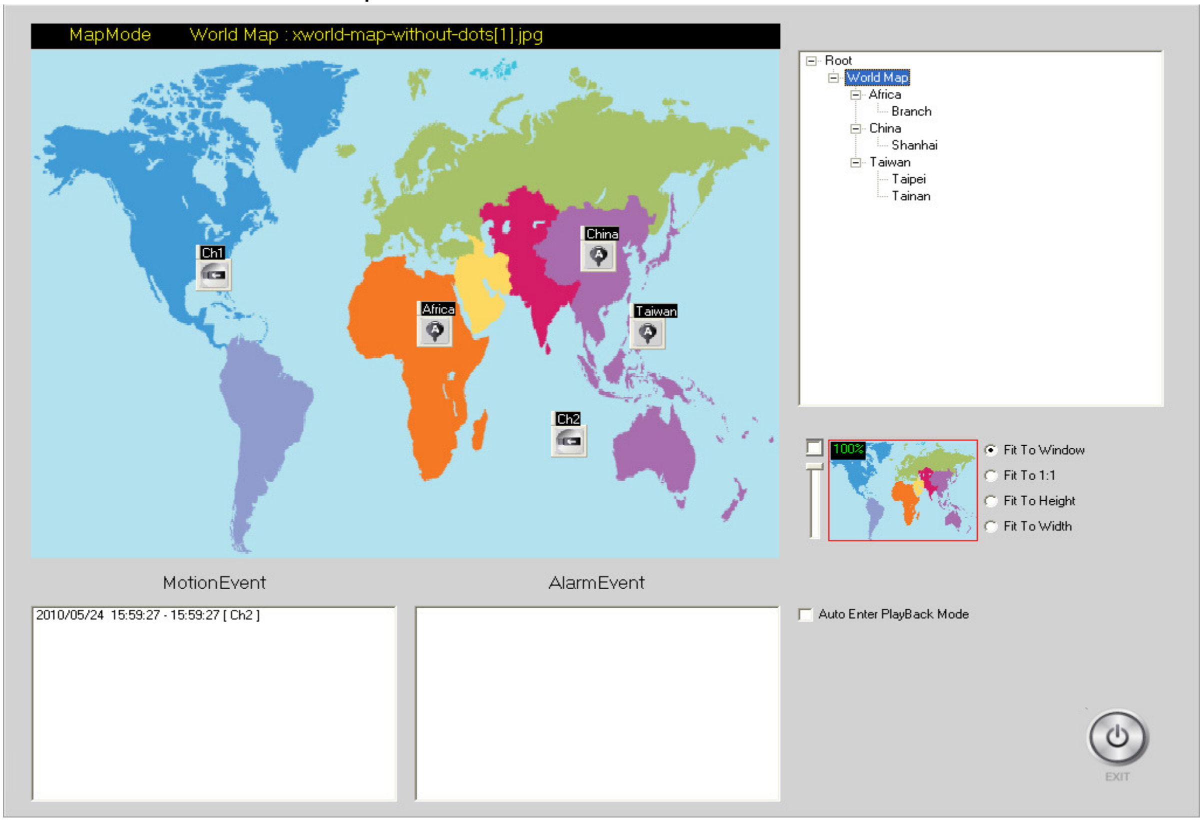
in the main page and click 

to enter the channel setup page. Check 

to disable digital zoom control.

IX. E-Map

Click  to enter E-map.

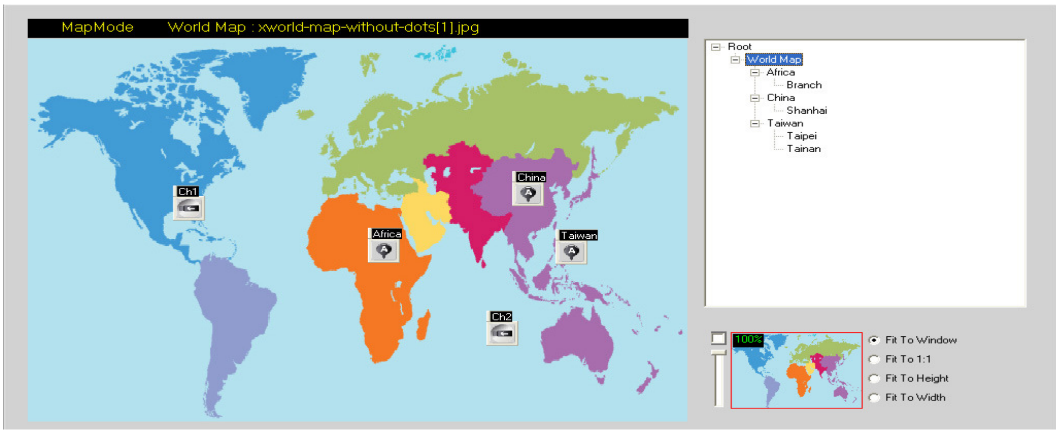


A. Tree View

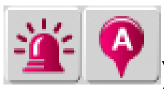
Tree view will present all the maps. Click each map can see all the cameras, alarm and triggers which are setup within the map.

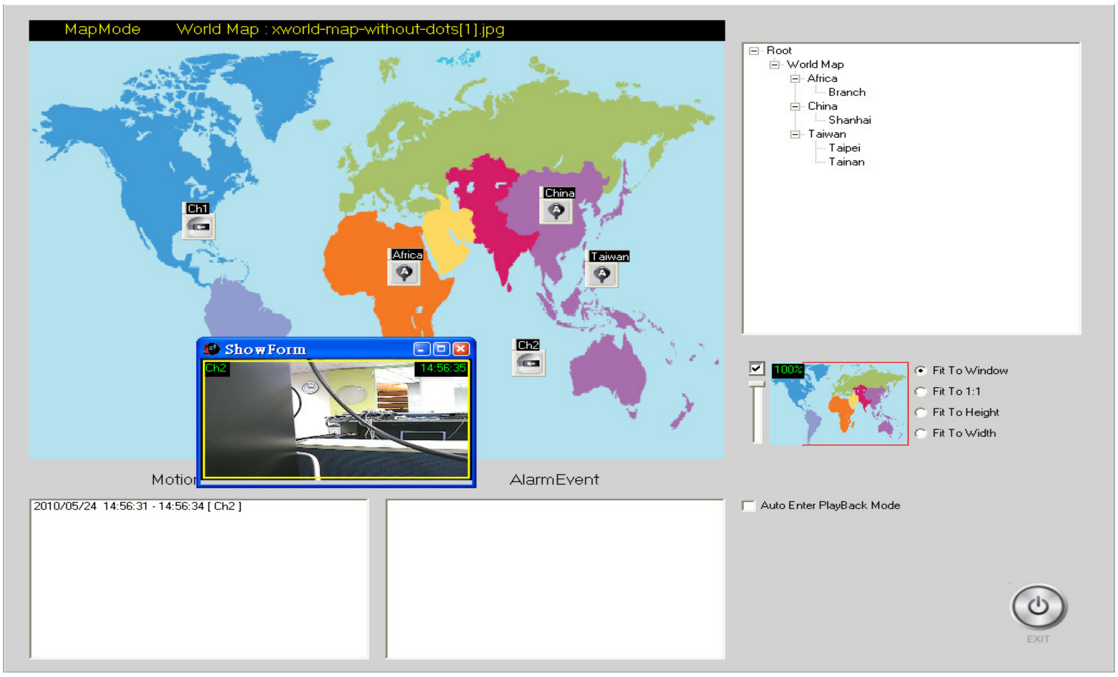


Moreover, double click the  icon on the map can also view all the cameras, alarm and triggers which are setup within the map.



B. Map

The camera icon and alarm icon will blink ( or ) when motion or sensor are triggered. Double click the icon to see the live video if necessary.

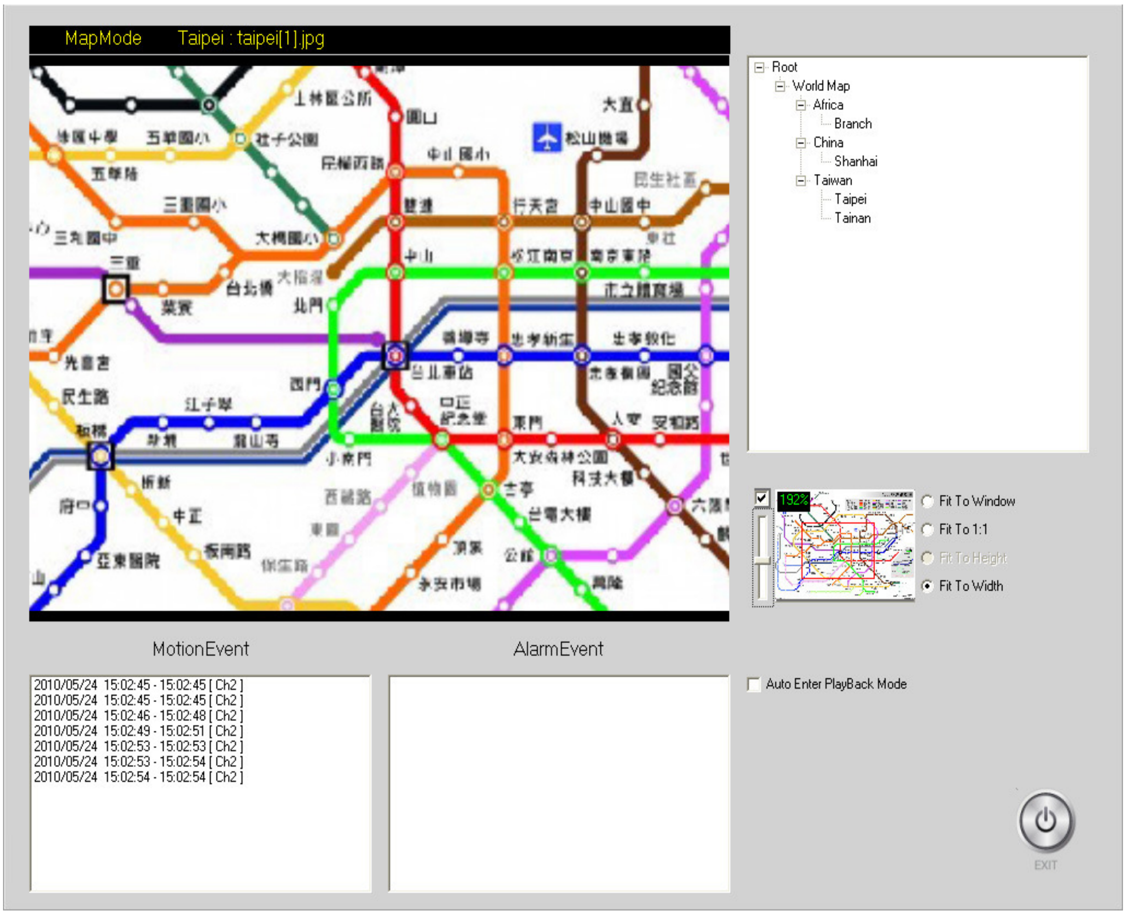


While the motion and alarm are triggered, the program will enter to the playback mode automatically to play the video. However, if the HDD has not setup, the following dialogue box will pop-up to remind the user.



C. Map Control

There are map zoom, map pan and map image size adjustment three control modes of the map.
Use mouse wheel can zoom in or zoom out the map, such as the following image:



When the original map size is larger than the default map size of the program, the user can adjust the map image size as the following image:



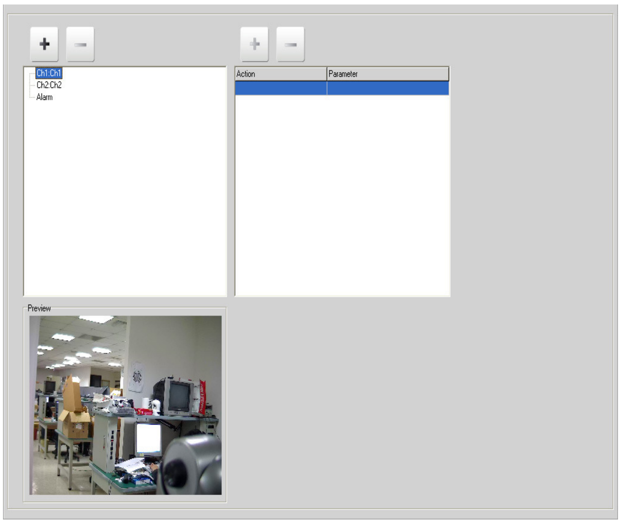
After zoom in the map, user can use left button of the mouse to perform map pan.

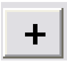
D. Event Record

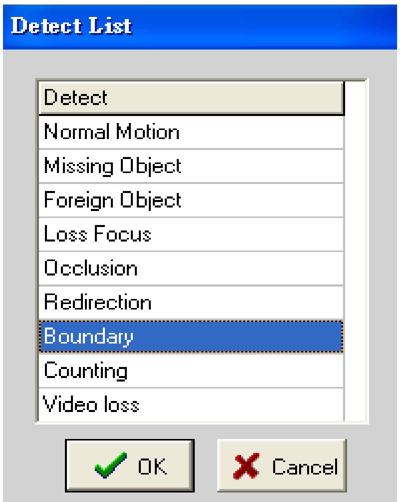
All the events (motion & alarm) will list on the bottom of this page. Selecting each specific event will trigger each event to playback.

X. Intelligent Video Analytics (IVA)

Click  button to enter the setup page of Intelligent Video Analytics.



Left hand side of screen will display all the channels which have been connected to the cameras. Press  button will pop-up the following image:

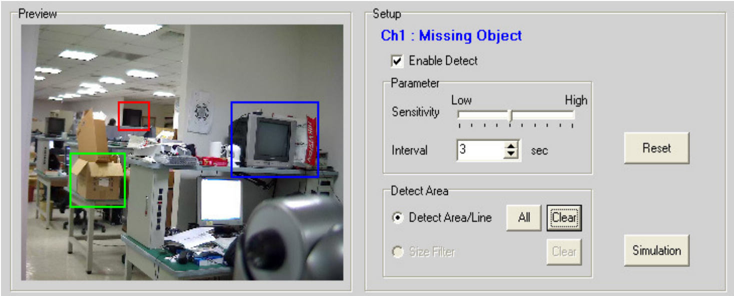


Recently, “Normal motion”, “Missing Object”, “Foreign Object”, “Loss Focus”, “Occlusion”, “Redirection”, “Boundary”, “Counting” and “Video loss”. There are nine IVS functions are supported.

NOTE：Counting function can be only applied in total 2 CHs due to the CPU loading issue. Others (ex. Missing object etc.) can be applied by user’s setting. Besides, One camera can use two IVA functions at the same time.

A. IVA Detection Event

i. **Missing Object**：Used to protect the concerned object. While the object is missing, the corresponding action will be revealed to remind the user.



a. Sensitivity: Adjust the sensitivity to adapt different situation and can avoid false alarm detection. When the sensitivity is higher, it is easier to be triggered. (Default Sensitivity Value is 5)

b. Interval: According to different applications, User can adjust different interval time. The default interval time is 3 sec. means while the program detects the object is missing longer than 3 sec. the alarm will be triggered.

c. Detect Area: Use the mouse to drag and pull the detect area. Currently, the program supports three detect areas. (If the size of detect area is similar with the detected object, it will increase the accuracy of the detection.)

d. Simulation: Through the previous setting to test and confirm the results whether the user needs or not.

ii. **Foreign Object**：Used to keep an eye on the protected area. While the un-belonged object appeals within the detected area, the corresponding action will be revealed to remind the user.



\

a. Sensitivity: Adjust the sensitivity to adapt different situation and can

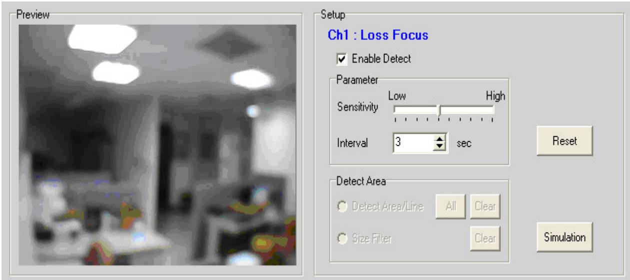
avoid false alarm detection. When the sensitivity is higher, it is easier to be triggered. (Default Sensitivity Value is 5)

b. Interval: According to different applications, User can adjust different interval time. The default interval time is 3 sec. means while the foreign object is appeared within the detected area longer than 3 sec. the alarm will be triggered.

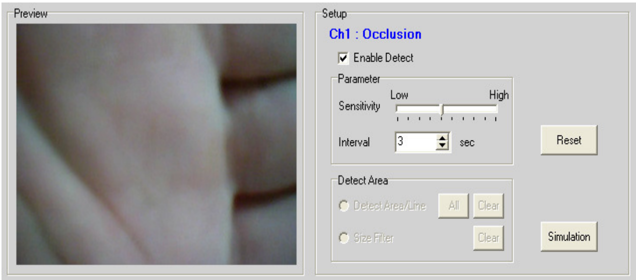
c. Detect Area: Use the mouse to drag and pull the detect area. Currently, the program supports three detect areas. (If the size of detect area is similar with the detected object, it will increase the accuracy of the detection.)

d. Simulation: Through the previous setting to test and confirm the results whether the user needs or not.

iii. **Loss Focus**：Used to detect the loss focus circumstance of the camera lens and trigger the response action which is select.



iv. **Occlusion**：Used to detect the occlusion circumstance of the camera lens and trigger the response action which is select.

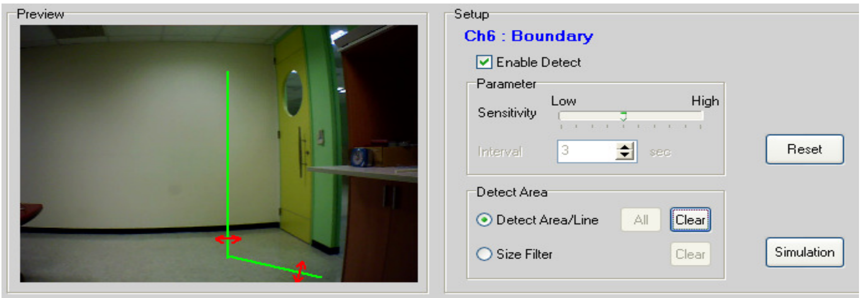


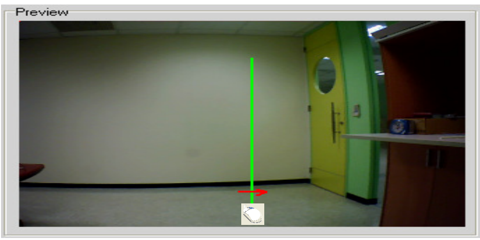
v. **Redirection**：Used to detect the redirection circumstance of the camera and trigger the response action which is select.

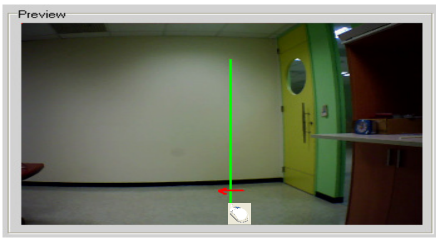


a. Sensitivity: Adjust the sensitivity to adapt different situation and can avoid false alarm detection. When the sensitivity is higher, it is easier to be triggered. (Default Sensitivity Value is 5)
b. Interval: According to different applications, User can adjust different interval time. The default interval time is 3 sec. means while one of the loss focus, occlusion and redirection is detected on the operating camera longer than 3 sec. the alarm will be triggered.
c. Simulation: Through the previous setting to test and confirm the results whether the user needs or not.

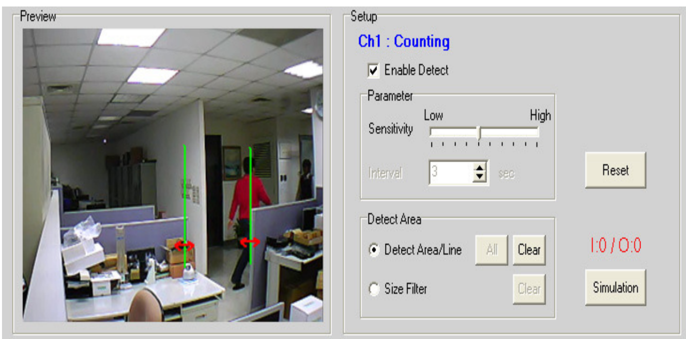
vi. **Boundary：**Boundary Functions is a set of lines projected from overhead into the lines detect area. When there is one person through the previous setting on its lines detect area, it will be judge that detects action. Also, you can use mouse and right click on the arrow place choice single way or two-way of the detect area/line.







vii. **Counting：**Used for counting the flow rate of people, and reveal the IN and OUT counting result separately. (I for IN and O for OUT)



Counting instruction: After counting is selected, use the mouse to draw two lines within preview window. While the people cross over these two lines, the program will count it automatically. The pre-draw line is defined as the first line and the post-draw line is defined as second line. When people cross over the first line then the second line, it will be identified as “OUT”; in contrast, it will be treated as “IN”.

a. Sensitivity: Adjust the sensitivity to adapt different situation and can avoid false alarm detection. When the sensitivity is higher, it is easier to be triggered. (Default Sensitivity Value is 5)

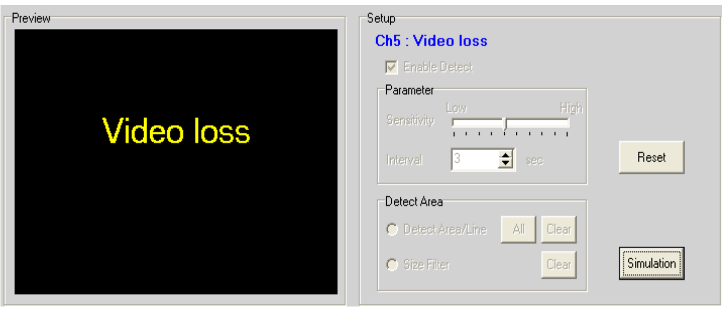
b. Simulation: Through the previous setting to test and confirm the results whether the user needs or not.

- When the color of detected object is similar with the color of background, the accuracy of the counting maybe decrease.
- The two lines should not to be drawn too close and please make them stay parallel.

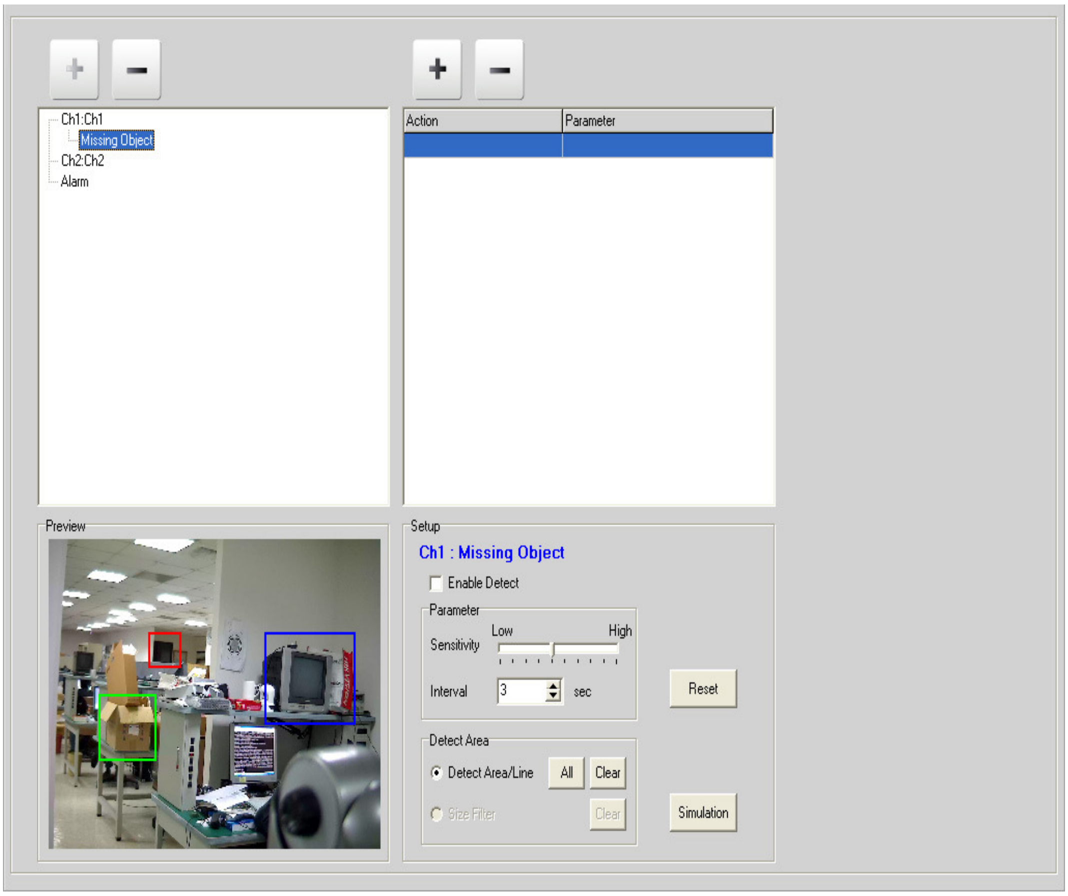
<<NOTICE ITEMS for COUNTING>> :

1. The distance between camera and detected object is more than 1M, and the mounted camera to the ground is more than 3M (Recommend distance).
2. Make sure the light of the detected area is stable.
3. Setup the image resolution above CIF (352*240)
4. The FPS of the image is over 5. The higher FPS to set, the better detect result to get.
5. The size of the detected object is at least 5% of the hall image.

viii. **Video Loss：**While Video server which disconnect any kind of analogy camera, the dramatic message of detect action will be revealed to remind the user.



B. IVA Result

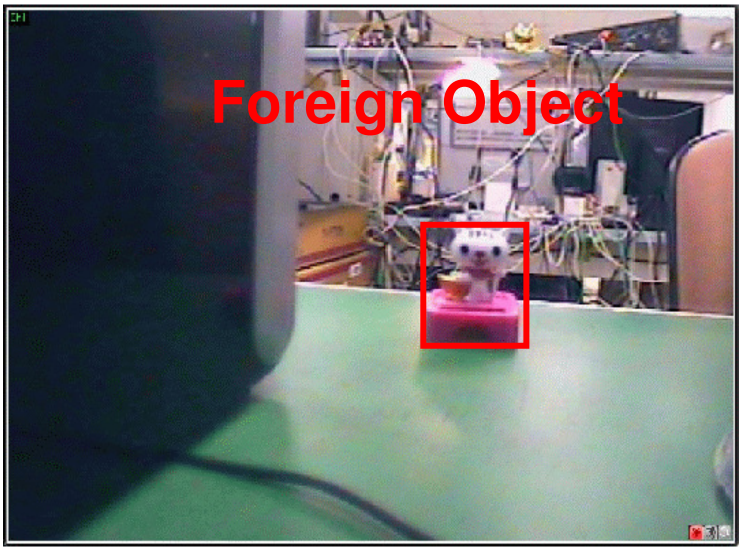


After IVS function is selected, please click right hand side  and it will pop-up the following action list.



Recently, the IVS edition program provides “Send E-Mail”, “Play Sound”, “Pop Up” and “Go To Preset” four response actions.

i. Screen Display: While the IVS items are triggered, the dramatic message of IVS item will be revealed to remind the user.



i. Send E-Mail: While the IVS items are triggered, the program will send the e-mail to the user. (**Note:** please enable the 

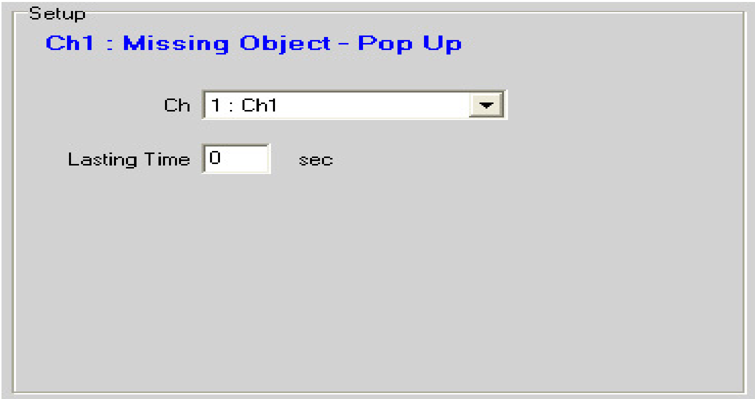
within system setup and complete the related setting.)

ii. Play Sound: While the IVS items are triggered, the program will play the buzzer or selected sound to alert the user.



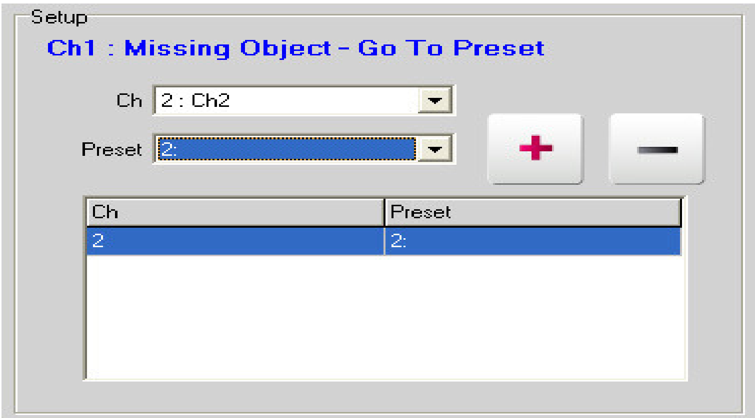
Note: While the play sound is setup to "0" sec., it means to play the sound continuously. If the sound is selected, press  button can test the selected sound.

iv. Pop Up: While the IVS items are triggered, the triggered channel will pop up to full screen.



Note: While the lasting time is setup to “0” sec., it means to display the full screen and will not switch back to split mode. If the dual-monitor function is enable, it will pop up to the second live view.

iii. Go To Preset: While the IVS items are triggered, the camera which supports PTZ function will move back to the preset point.



Note: Channel Column: It displays the camera which supports PTZ.

Preset Column: It can select the preset point of the camera; moreover, click  button to add the new channel and its preset point. The detail setting instruction of preset point is among PTZ Setup.

XI. System Report

Get into administration page and press  to enter "Report" page.
The resource management tool could detect whether the system operation is normal or not.

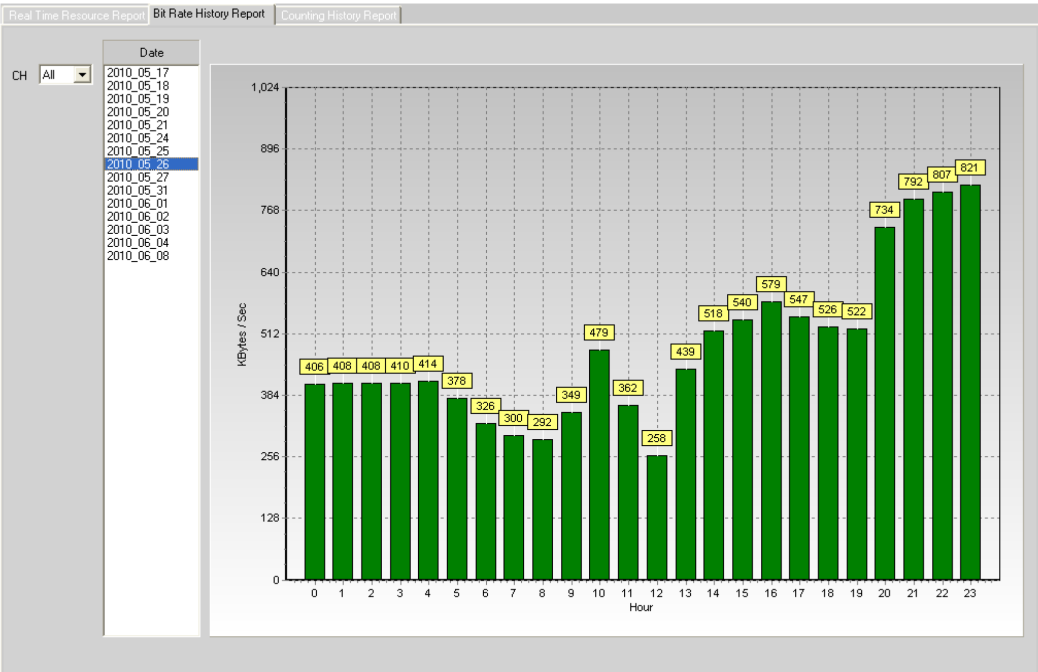
A. Real Time Resource Report

The Resource Management Tool could detect whether the system operation is normal or not and maintain the system efficiency.



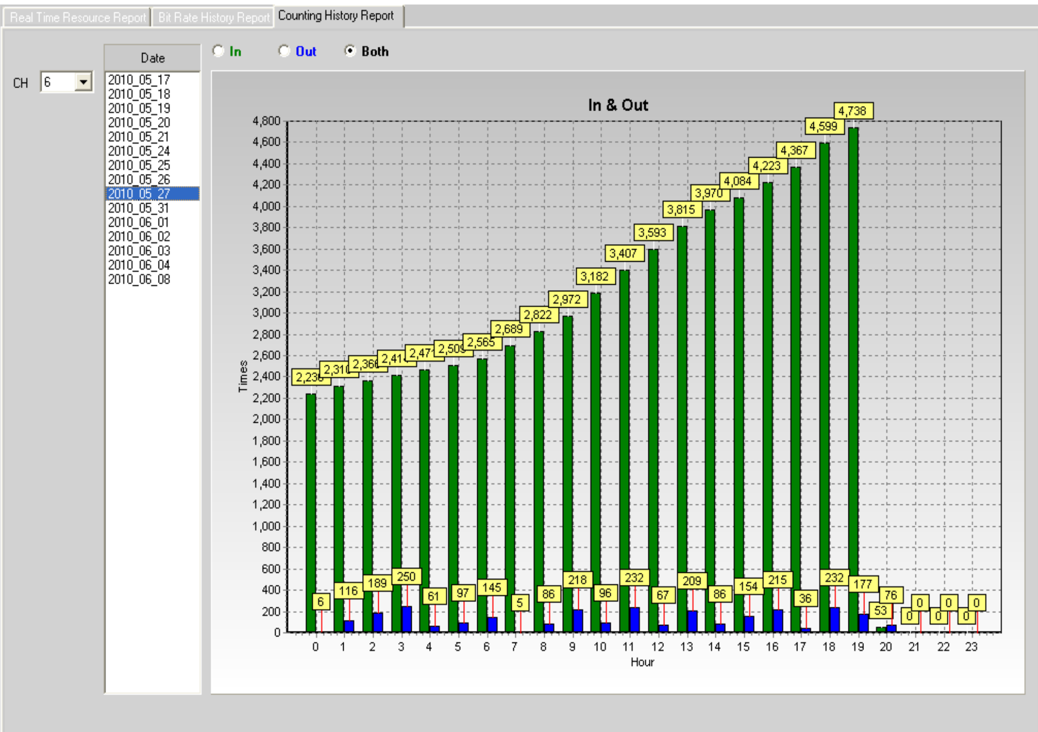
B. Bit Rate History Report

This item shows the individual camera or all channels bit-rate utilization of the running computer information.



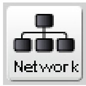
C. Counting History Report

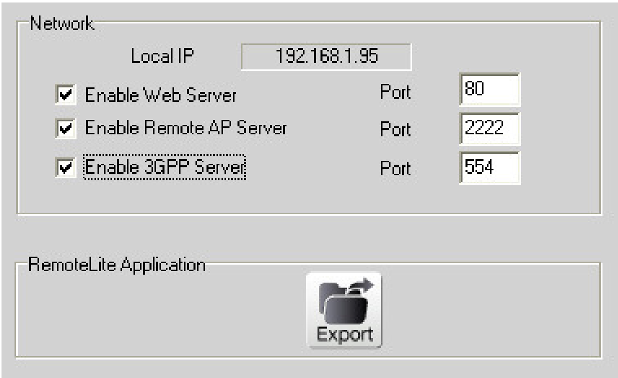
The counting history report helps user manage and understand trends and patterns that affect the everyday operation information.



XII. Remote Control

Through activating the function of Web server, 3GPP server and remote program server, Network Recording Software provides web server browser, 3G mobile browser, remote program and remote lite program for user’s demand.

Enter the administrator page, please click  and activate these three remote connection methods within network setting area which is shown in the following.

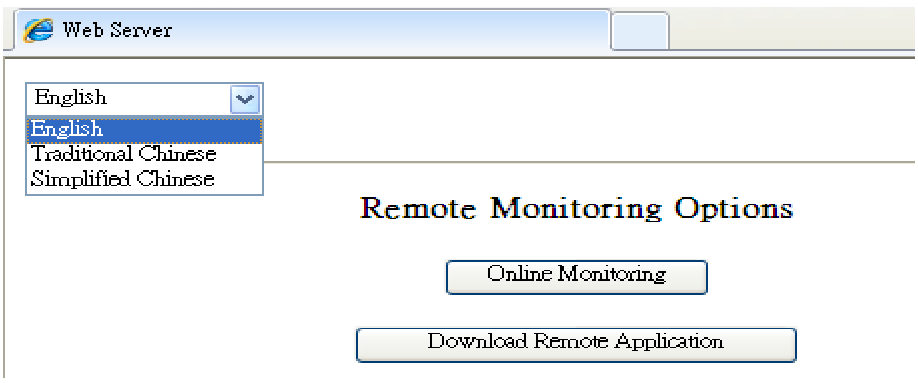


A. Web Server

Enable Web Server will allow web browser to connect to recording software server to monitor real-time image. Please refer to instructions in the following.

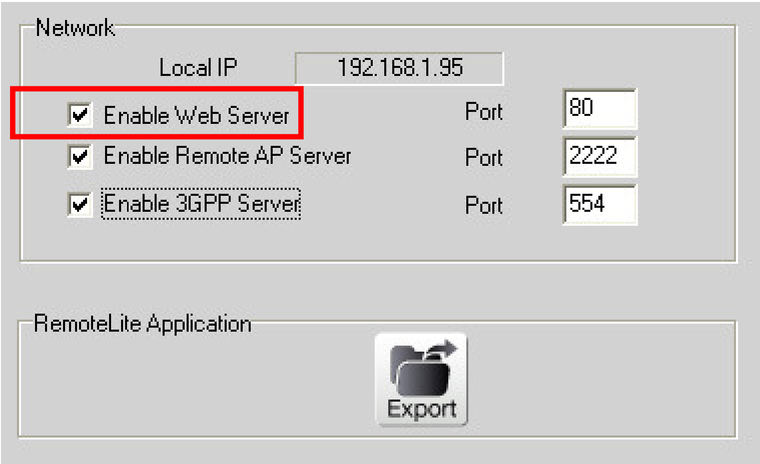
i. Connection Method: In Windows Vista, please click right click on the IE web browser and select “Run as administrator” to start the program. For example, within Internet Explorer 7, input the address: http://192.168.1.195/ (which is seen in above image 192.168.1.95).

ii. Connection Page: After successfully connected, the user will see the operating interface shown in the following:



Upper-Left of the connection page shows the Language options, which includes “traditional Chinese”, “simplified Chinese” and “English” options currently. The following are the remote Monitoring options:

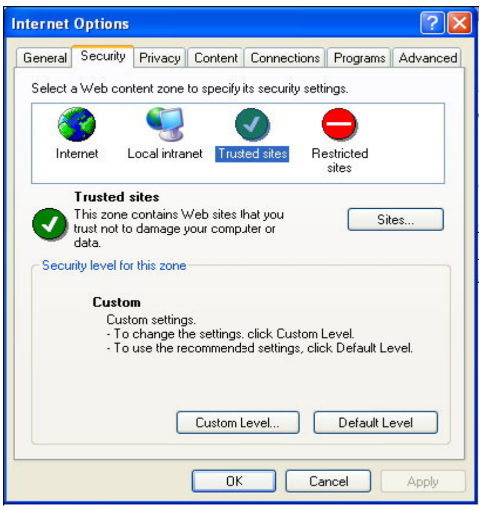
iii. On-Line Monitoring: The function has to operate with “Remote AP Server” enabled. If the OS has installed Windows XP or Windows Vista, please perform the following internet options setting steps:



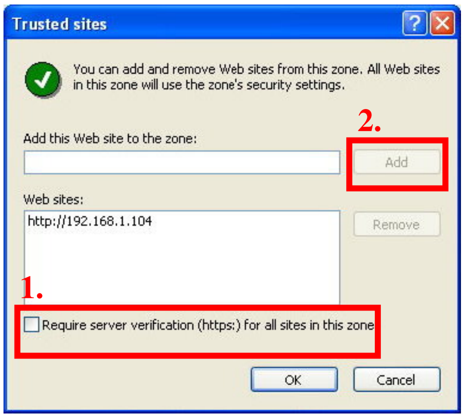
a. Click the “Tools” → “Internet Options”



b. Click “Security” → “Trusted sites”



c. Click sites, and then unclick the option in Step 1. Input the IP address of the recording software server in the "Add this Web site to the zone" area, then click "Add" button (Step 2) to complete the trusted sites list. Finally click "OK" to exit.



d. After entering "Online Monitoring", please click "information bar" when enter the first time. (The prompted information is normally located under the browser).



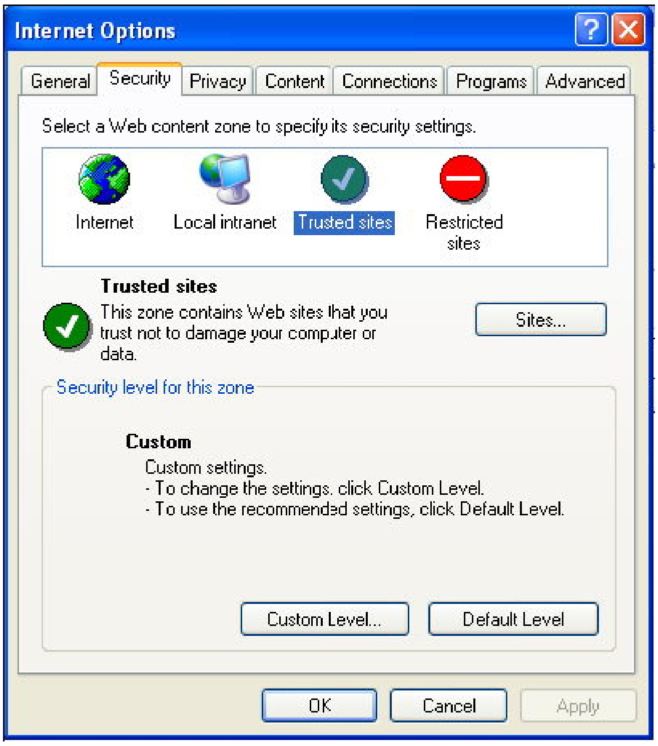
V. Within the pop-up drop down list, please click "Install ActiveX Control".



VI. Click "Install" to perform the installation.



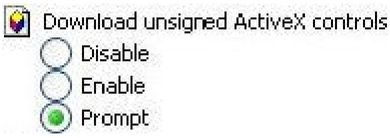
VII. If the installation does not work, please click "Tools" → "Internet Options…" → "Security" tag → "Custom Level"



Security Settings window will pop-up, and the user has to change the following options:



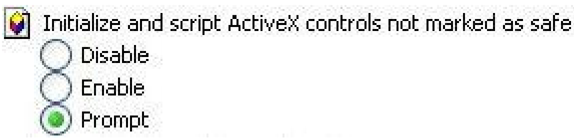
→ Set for “Prompt”



→ Set for “Prompt”



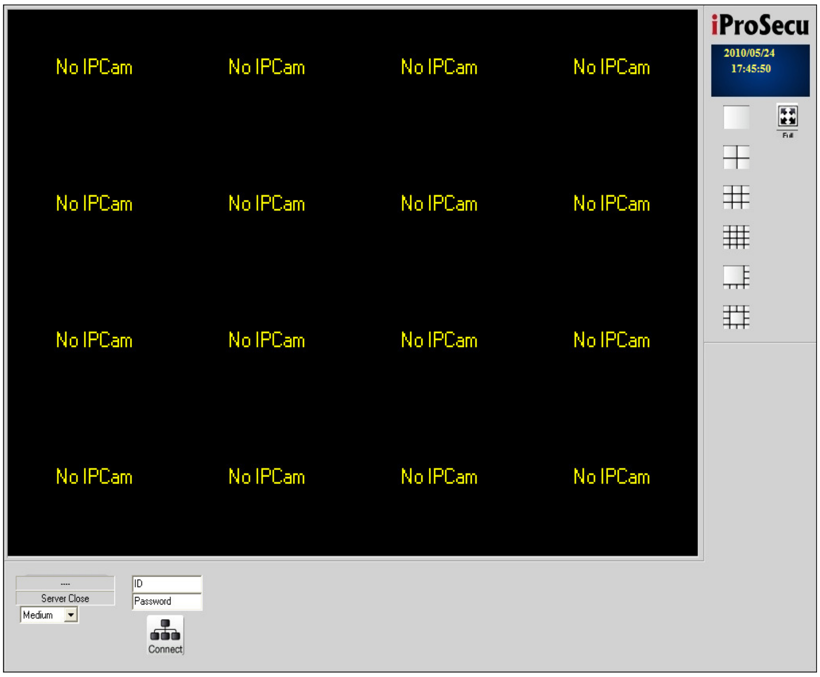
→ Set for “Enable”



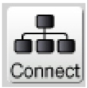
→ Set for “Prompt”

After complete the setup, please repeat Step d~ Step f.

h. After the installation, the online monitoring page will show as following:



i. Input the correct User Name and Password 

, and then click 

to connect with the camera.

j. During the connection, the user can adjust the image transmission quality. 

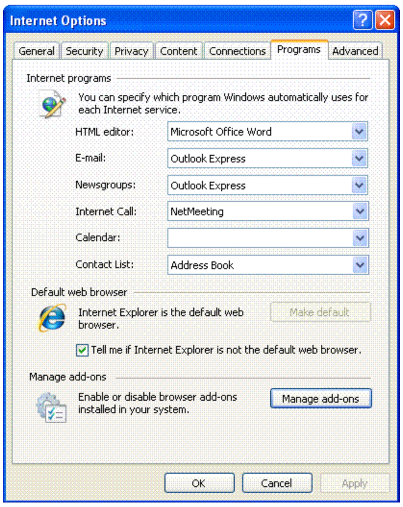
.

iv. Remote Online Monitoring Control: Please refer the following steps to remove Online Monitoring software

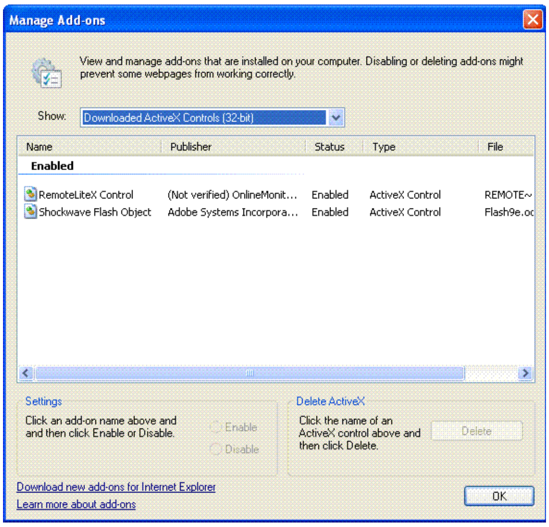
a. Select “Tools” → “Internet Options…”



b. Select “Programs” tag → “Manage Add_ons…”



c. Select “Downloaded ActiveX Controls” option, and then choose “RemoteLiteX Control”, finally click “Delete” button and “OK”.



Internet Explorer 6、Windows XP or Windows 2000：

a. Open the OS installation folder, such as “C:\Windows” or “C:\WINNT”.

b. Open “Downloaded Program Files” folder.

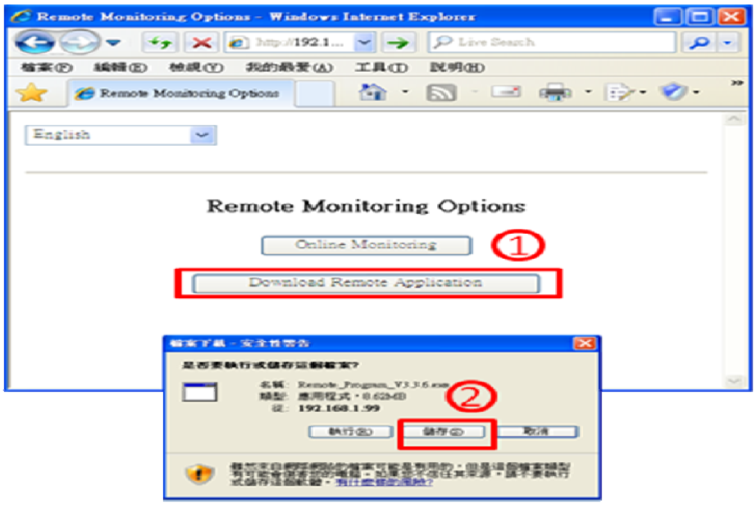
c. Right-click the mouse on “RemoteLiteX Control” option and select “remove” to delete Remote Online Monitoring Control.

v. Download the remote program: When select “Download remote program” from main page, the user can download the installation file of remote program.

B. Remote Program Server

By starting remote program server, it enables Remote Program software to connect with the PC server which is using Network Recording Software series. Remote program allows user to remotely “View Live Video”, “Setting”, and “Playback”. The operation of Remote Program Server is similar to Network Recording Software series. Users can set up their own video recording setting, which includes scheduling, motion detection recording. Remote Program can also perform video playback and smart search via time researching.

i. Program Installation: Remote control software program has been installed when installs Network Recording Software series. The user may also download installation program from the webpage server for the individual installation.



ii. Program start and remove:

a. If remote program was installed with Network Recording Software series installation: Select “Start” → “Program” → “Network Recording Software IVS ” → “Remote” to start the program. 

b. With Windows Vista, please right-click the remote control program, then select “Run as administrator” to start the program.

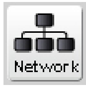
c. Program remove: the remote program will be removed together when user removes Network Recording Software series; however, If the remote program was installed individually, the user can select “Start” → “Program” →

"Remote Program" → "Uninstall" to remove the program.

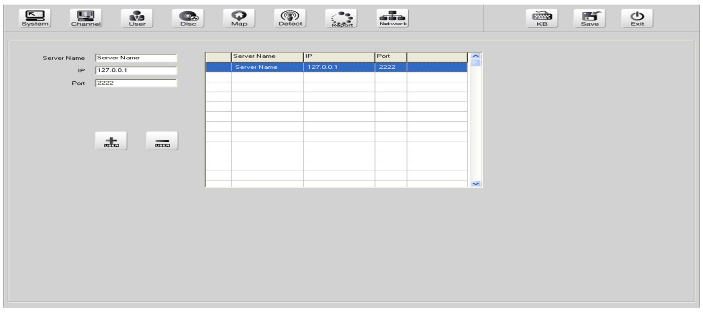
iii. When you want to start the Remote program before, please make sure that you want to remote server "Remote AP Server" is Enable. You can enable this function from local software network setting.



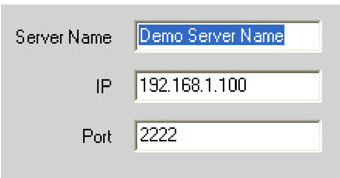
iv . Connection Set Up: Please refer to following steps.

a. When running the Remote Program, the first step is to connect to the server. Within the setup interface, please click 

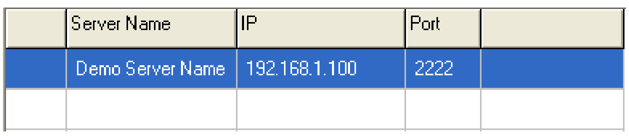
to setup connection:



b. Please fill in the server information such as Sever Name, IP address and Port. For example:



The Server Name is not required to be a specific name which is only for easy recognition. The IP and Port are the access to the Network Recording Software series. It should be correctly input to start the connection of the Network Recording Software series. After filling the information, please click  to add one more server：



	Server Name	IP	Port	
	Demo Server Name	192.168.1.100	2222	

c. The Remote Program supports multi-server list for easy maintenance. When user intends to delete a server, please select the server first then click  to delete.

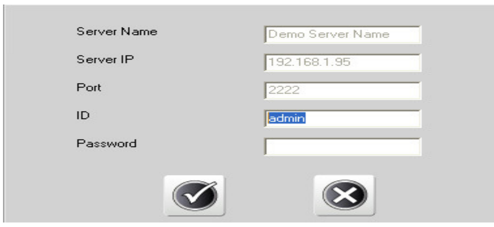
d. Please click 

to save the information.

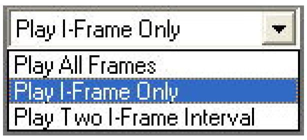
iv. Live Video Monitoring: Please refer to following explanation for more information.

a. 

: From top to bottom column, which are "the current server", "server status (might display different text depending on server status)" and "server list". When double-click a server form the list, the following figure will pop-up.



After keying in the correct user ID and password, please click  to start the connection.

b. 

: The video display time interval. There are three options to choose, which are "Play All Frames", "Play I-Frame Only" and "Play one frame after every two I-Frame Interval". Because Remote Program does not connect to IP Camera / Video Server / DVR directly, it connects to recording software server instated. Therefore, user can adjust the display time interval depending on the network condition.

c. Remote program receives the image from the remote server, thus there are different real-time monitoring mode depending on different series of recording software:

4Channel version	Can be switched to 4CH [2x2] and 1CH [1x1].
9Channel version	Can be switched to 9CH [3x3] 、4CH [2x2] and 1CH [1x1]
16Channel version	Can be switched to 16CH [4x4] 、9CH [3x3] 、4CH [2x2] 、1CH [1x1] 、8CH and13CH .
36Channel version	Can be switched to 36-CH [6x6], 16-CH [4x4], 9-CH [3x3], 4-CH [2x2] and 1-CH [1x1].
72 Channel version	Double click 36-CH icon [6x6] twice.

Full	Full Screen mode. To exit the full screen mode, please right-click the mouse.
Min	Minimize the program.
Loop	Auto switching channel. Users can set different auto switching combinations.
RECORD	Manual recording. User may start recording immediately. To stop recording, please click the recording button again.
PLAYBACK	Playback mode, will play recorded video from remote server.
SETUP	Enter the administration page. Setting from remote server can be changed from remote program. The setup is the same as Network Recording Software . Note: After changing the setting, the server will be changed as well.

C. 3GPP Server

To start 3GPP Server, it can enable 3G mobile phone to connect with the server which is using Network Recording Software to monitor the real-time image.

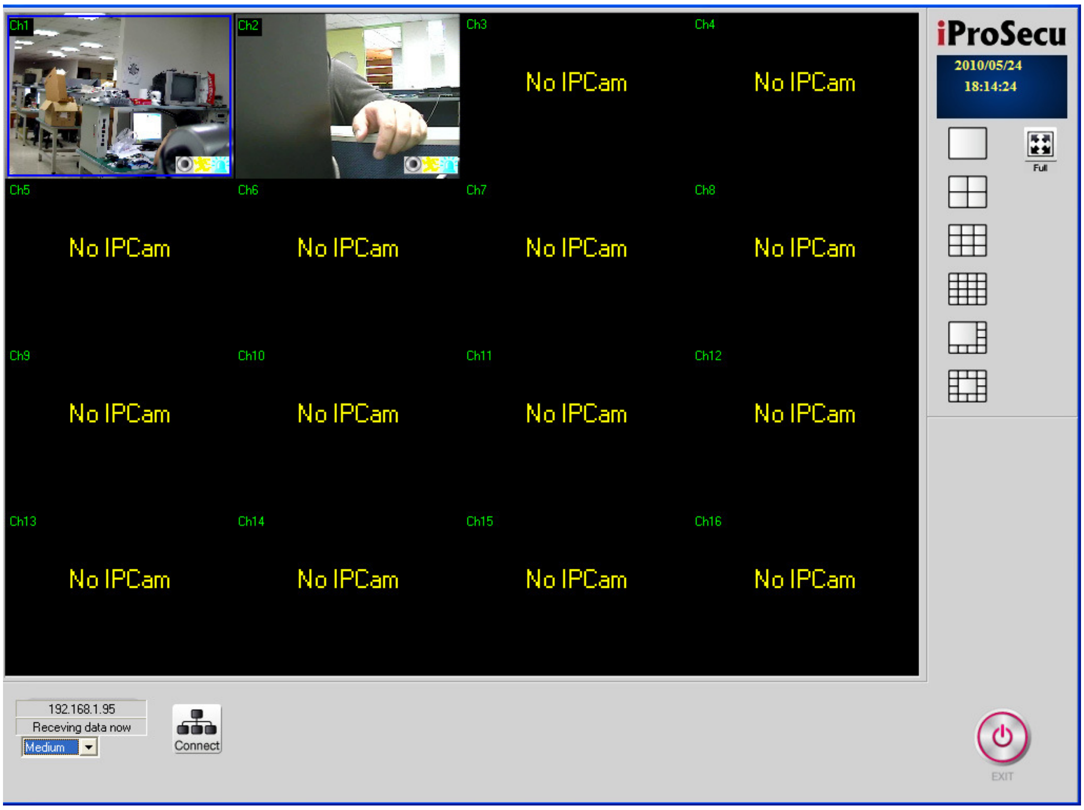
i. Start "Streaming Media Player" of 3G mobile phone to connect with the Internet.

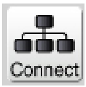
ii. Input the address "rtsp://IP:Port/CH number", such as : "rtsp://192.168.1.104/CH01"(monitor CH01 real-time image.). Moreover, due to 554 is the default number of rtsp, it can be ignored when the setting port number in Recording Software. 3GPP connection port is default at port 554.

iii. After click the connection, the user can monitor the selected channel.

D. Remote Lite

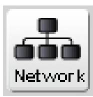
Remote-Lite is video recording software which is different from Network Recording Software series. Basically, Remote Lite is designed for live-viewing only. It is not allowed user to playback or to change any setting. The Remote Lite is not installed within the Network Recording Software series; instead, it is exported by the Network Recording Software series. User can select each channel or part of them to export. In Windows Vista, please right-click on the remote lite program, then select "Run as administrator" to start the program. Please refer to following example which is based on 72CH Network Recording Software.



Remote Lite supports multi-channel, full screen, and network connection setup. To gain connection, click 

on the lower-left. User can select different transmission speed (Fast, Medium and slow). The speed of server will be the same as Remote Lite.

Export Remote Lite：

i. Get into main setup page then click 

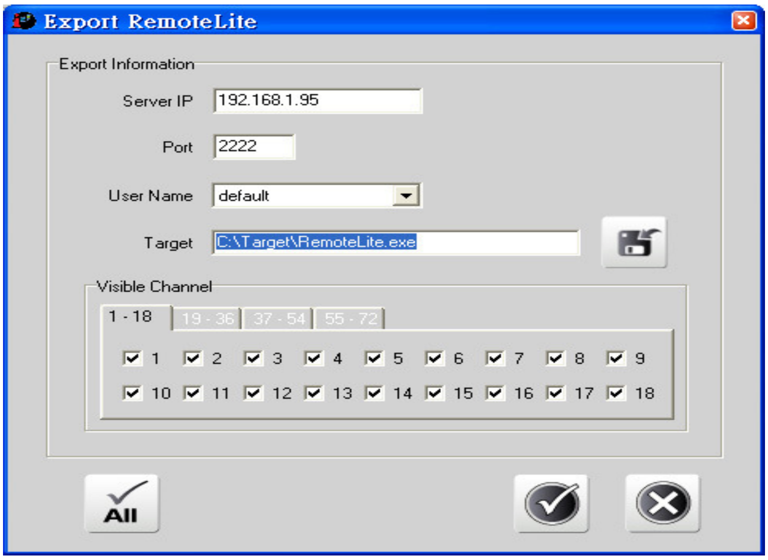
。

ii. Within "Remote Lite Application"



,please click 

to open Remote Lite setup page. Please refer to following figure(72CH based).



a. Sever IP：The network location of the server.

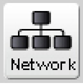
b. Port：The access port of the server.

c. User Name：The available names are preset by main program. User should have the authority to gain the access of the main program using Remote Lite.

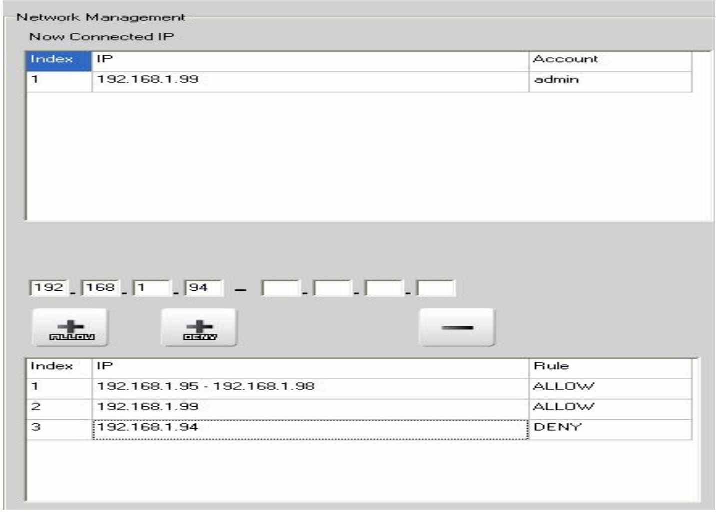
d. Visible Channel： User can select each channel intending to export. For instance, if user "only" selects 1 and 2 channels to export, then other channels will be the private channels. The user can also click  to select all channels. In contrast, click  button again to cancel all selected channels.

e. Note：After finishing above setting, user can click  to name the exported program. The administrator can export different Remote Lites to meet different users' needs. Finally, do not forget to click  to export the Remote Lite.

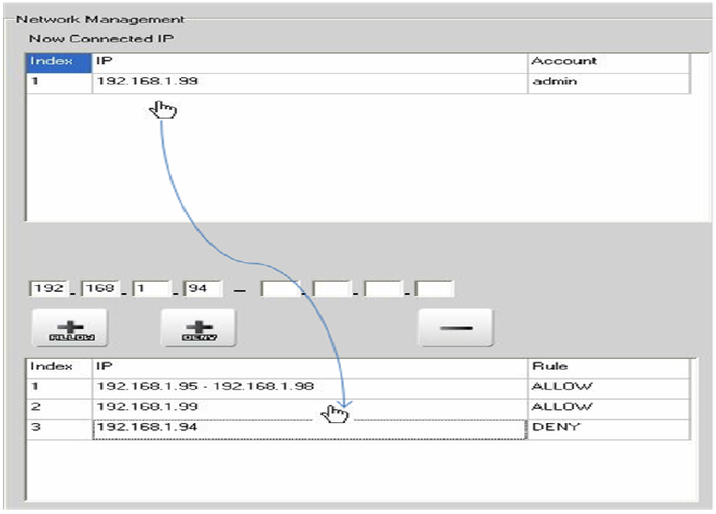
E. Network Management

Get into administration page and press 

button to enter an IP address or series of IP(s) into the IP address field on the mid. User can set the remote limits of authority and this list can be either “Black List” or “White list”. Besides, user can easy to know connected IP status of the remote control function.



Also, you can quickly use mouse drag and drop into Black or White list.



F. Remote Connect Max Number

You can adjust max remote connector and based on server’s PC performance.



XIII. Others

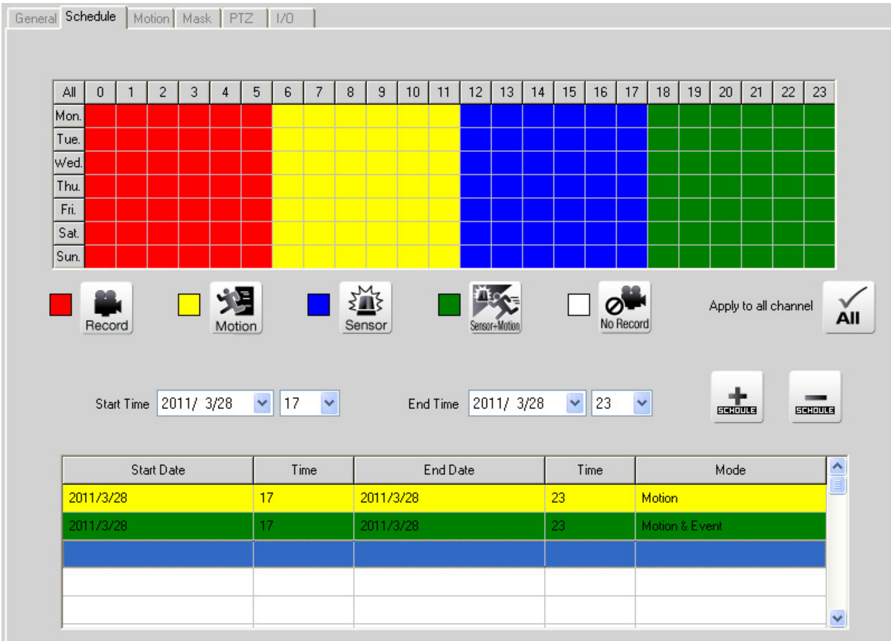
A. Schedule record setting

NETWORK RECORDING SOFTWARE series support different recording mode for different channel.

i. Get into administration page. Click 

.

ii. Select channel to set up the schedule. Select “Schedule” tab.



iii. There are supports 5 recording modes, General(red), Motion detection (yellow), Alarm detection(blue), Motion with alarm detection(green), and No record (white).

iv. Use mouse to select time then choose what kind of recording mode to use.

v. Click 

 to make all the channels using the same recording mode.

vi. Besides daily schedule recording, ISS series supports specific time recording. Determining start/end time then click 

 to add to schedule.

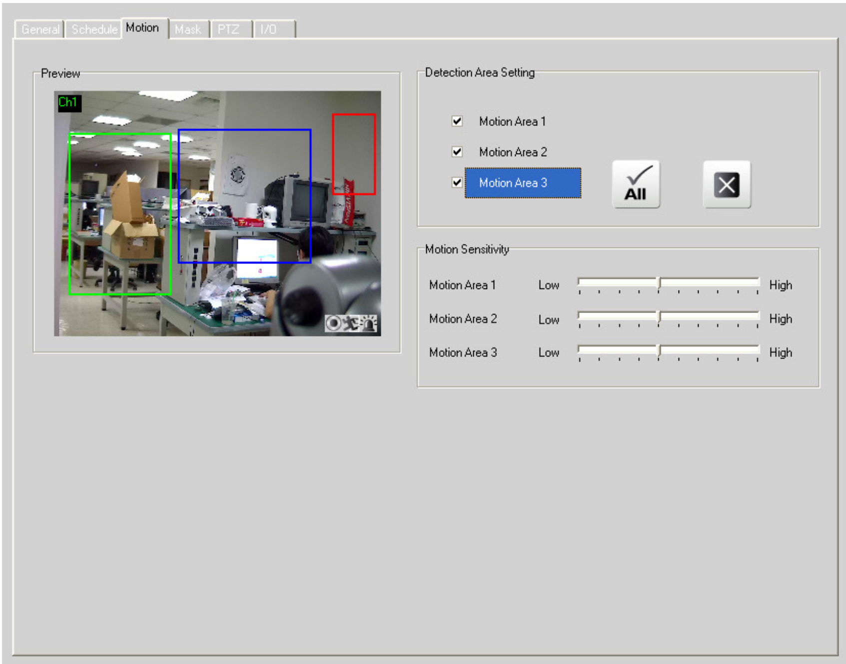
Notice: Specific time recording has higher priority than daily schedule.

B. Motion Detection

Each channel can set up 3 areas to detect to motion.

i. Get into administration page. Click 

ii. Select channel to set up the motion, Select “Motion” tab.



iii. Detection Area Setting: Click area, the use mouse to draw the area to detect motion.

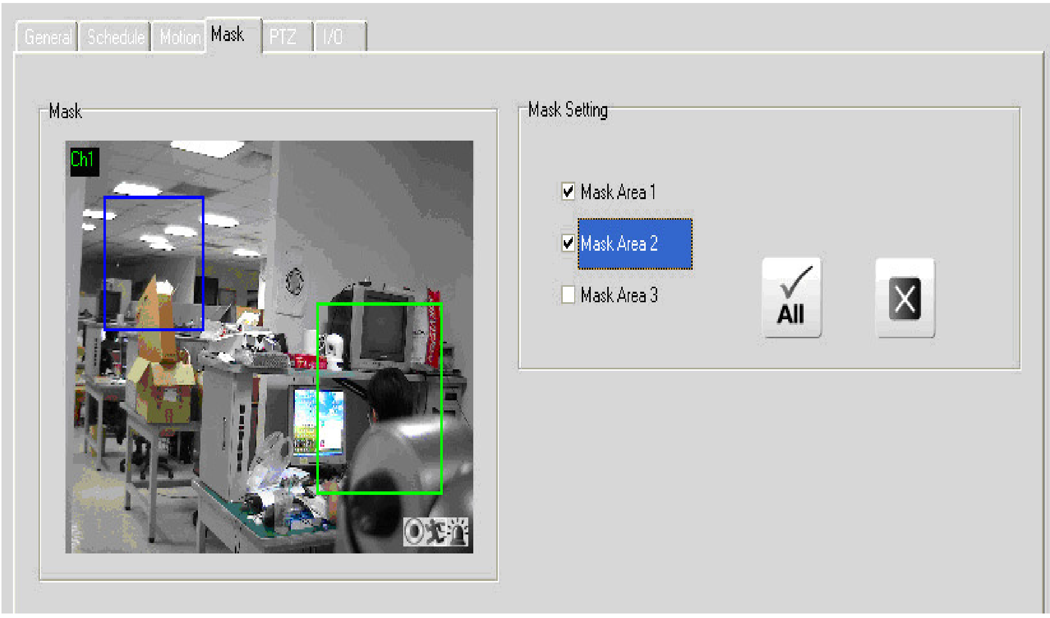
iv. Motion Sensitivity: adjust the sensitivity for each channel.

C. MASK

NETWORK RECORDING SOFTWARE series support different mask areas in each channel; moreover, there are 3 mask areas can be setup.

i. Get into administration page. Click 

ii. Select channel to set up the mask, Select “Mask” tab.



iii. Select the Mask Area and then drag and pull the mask area.

iv. After complete the mask setup, the live view will be shown as the following image:

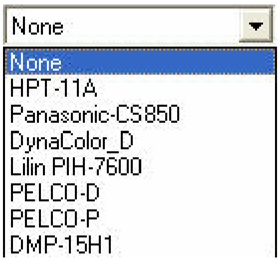


D. PTZ setup and control

NETWORK RECORDING SOFTWARE series support remote PTZ control.

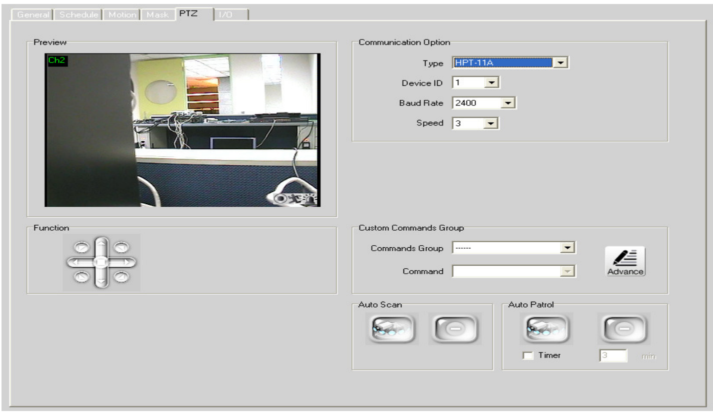
i. Get into administration page. Click 

ii. Select the channel which supports PTZ, Select “PTZ ” tab.

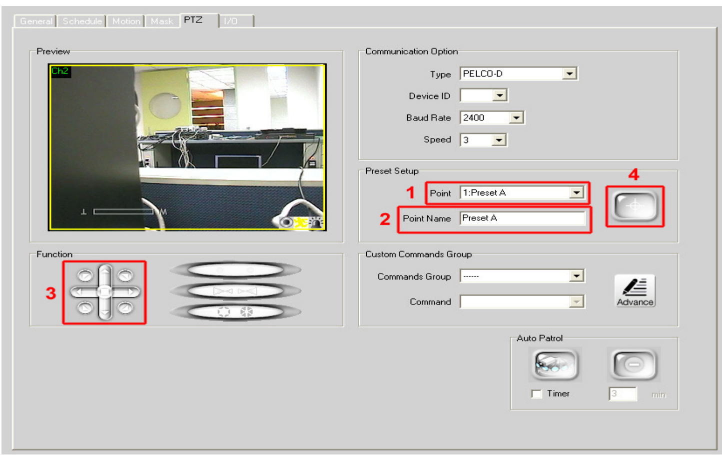


iii. NETWORK RECORDING SOFTWARE series support different PTZ protocols.

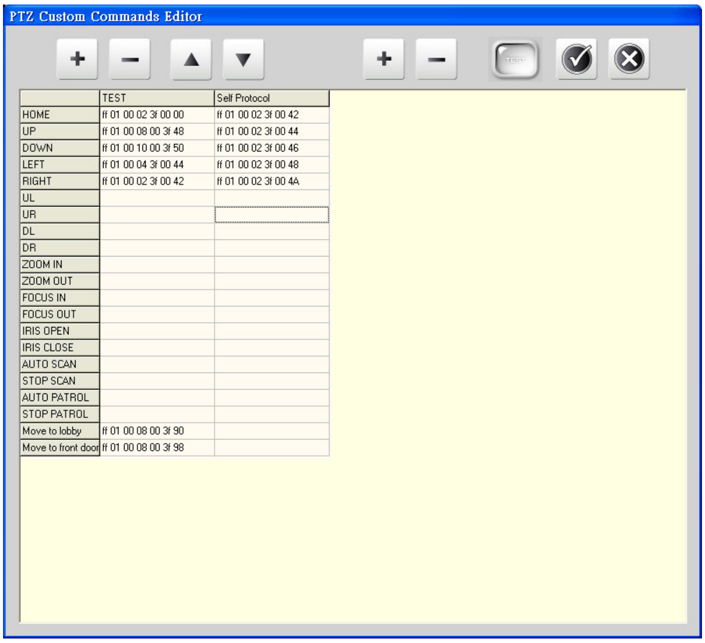
iv. Make sure to choose the right protocol, ID, baud rate.



v. Detecting point preset setup: Please refer to following figure.



vii. PTZ Custom Command Group: Currently, PTZ custom command **only supports video server**. This function provides the user to add or define its own command within the provided protocol. Moreover, the user can create a new protocol as well. Click  button will reveal the following image,



User can define its own command, the instructions of each button are shown in the following;

a.  : Add/ Delete Custom Command.

b.  : Move Up/ Move Down Custom Command.

c.  : Add/ Delete Custom Command Group.

d.  : Test the function of Custom Command.

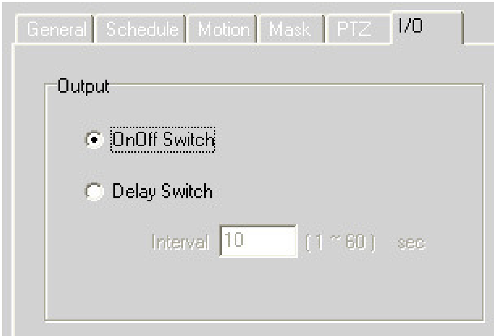
e.  : OK/ Cancel.

viii. When finish the PTZ setup, use the control panel to control the PTZ.

E. I/O setup

i. Get into administration page. Click 

ii. Select the channel which supports I/O, Select “IO ” tab.



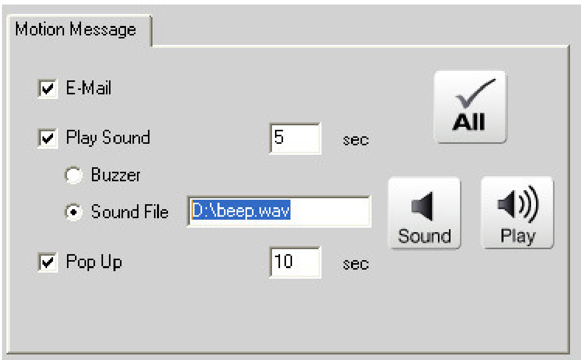
iii. Network Recording Software series support 2 types of I/O. Users can determine delay time interval from 1 to 60 seconds.

iv. In the live-viewing, I/O interface may have different controller depending on each channel or remote device.

F. Motion/ Alarm Event setup

i. Get into administration page. Click 

ii. Select the channel which supports I/O, Select “IO ” tab.



iii. The response actions are shown in the following when motion and alarm are triggered.

a. E-Mail: Send the E-Mail. Please click  option first, and then click  button to complete the relevant setting.

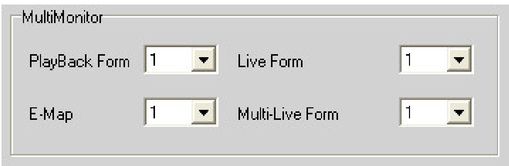
b. Play Sound: Setup the time of play sound. (NOTE: 0 sec is represented the sound is continuing until the user clicks the triggered channel.) The user can select the sound from the buzzer or the specific sound file by clicking 

button. Moreover, after complete the sound file setting, please click 

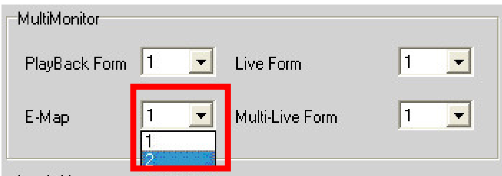
to test the selected sound file.

c. Pop Up: If the selected channel is triggered, the program will pop-up and display the triggered channel in the full screen mode. Furthermore, the user can select the pop up time as well. (NOTE: 0 sec is represented the full screen of the triggered channel is continuing displayed and will not back to the split screen mode.)

G. System



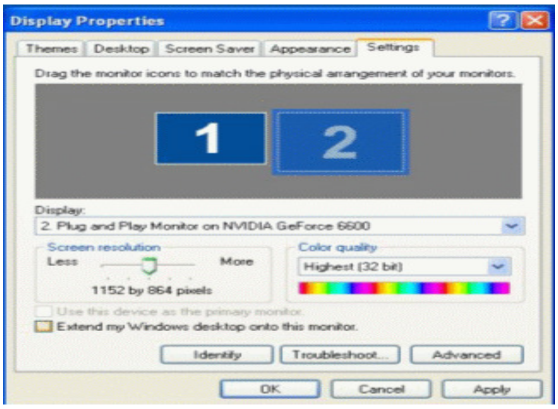
i. Multi-Monitor setting：Under the PC connects Multi-Monitors (it refers to exceed two monitors), the user can select what is displayed on the connected monitors. This function can be worked while the PC installs graphic card which is supported Multi-Monitors* and connects more than one monitor. Moreover, Network Recording Software series will detect the quantity of connecting monitors.



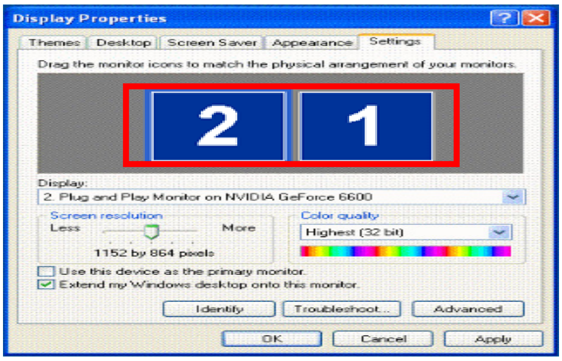
(* Normally, the graphic cards which is supported to Multi-Monitors are D-SUB + DVI interface and has to connect one D-SUB monitor and one DVI monitor. Moreover, some graphic cards will have DVI to D-SUB connector. Through the connector, the graphic card can support D-SUB + D-SUB interface and can connect two D-SUB monitors such as ASUS A9200SE. Nowadays, the higher level graphic card can support DVI + DVI interfaces, and has to connect two DVI monitors.)

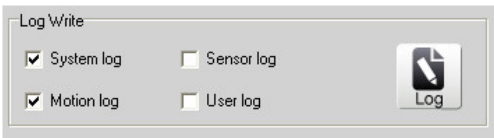
It could be performed the following setting after connected multi-monitors and reboot the PC.

a. Click the disable monitor number (i.e. No.2 in the following image.) and select “Extent my Windows desktop onto this monitor” option.



b. Drag and drop the monitor icon to correspond the actual monitor position.



iii. 

Log Export：Please select which log file to save. To export system’s log file to some files such as Excel or CSV files, please press 

button to process.

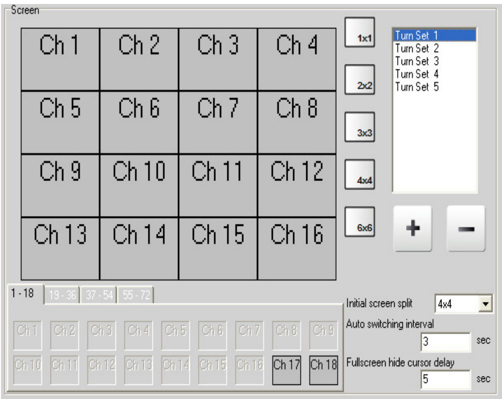
iv. Screen setup：Users can customize live-viewing by choosing different channels to swap. Please refer to following example for different versions depending on different channels.

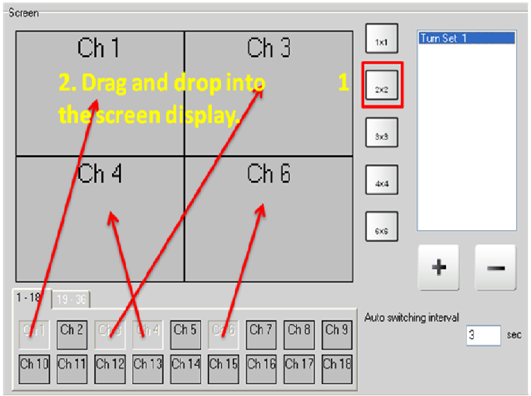
a. 4CH version: For each split window, user can setup to 4CH and 1CH swap mode. There are up to 10 combinations.

b. 9CH version: For each split window, user can setup to 9CH, 4CH and 1CH swap mode. There are up to 20 combinations.

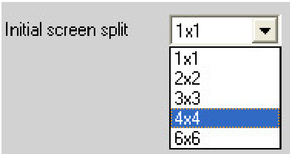
c. 16CH version: For each split window, user can setup to 16CH, 13CH, 9CH, 8CH, 4CH and 1CH swap mode. There are up to 30 combinations.

d. 36CH and 72CH version: For each split window, user can setup to 16CH, 9CH, 4CH and 1CH swap mode. In 36CH, there are up to 40 combinations and in 72CH, there are up to 80 combinations.





v. Default Split Number: The user can setup the default split number when the software started. The following image is based on 72CH.



vi. Keyboard Lock： Check 

to enable keyboard lock. By enabling this function, the application hotkey will be disabled (i.e. Ctrl + ESC、Alt + Tab、WIN and Alt+F4) to avoid illegal usage.

vii. Windows reboot: Click 

to set up the time to reboot Windows automatically. It will re-start the NETWORK RECORDING SOFTWARE automatically.



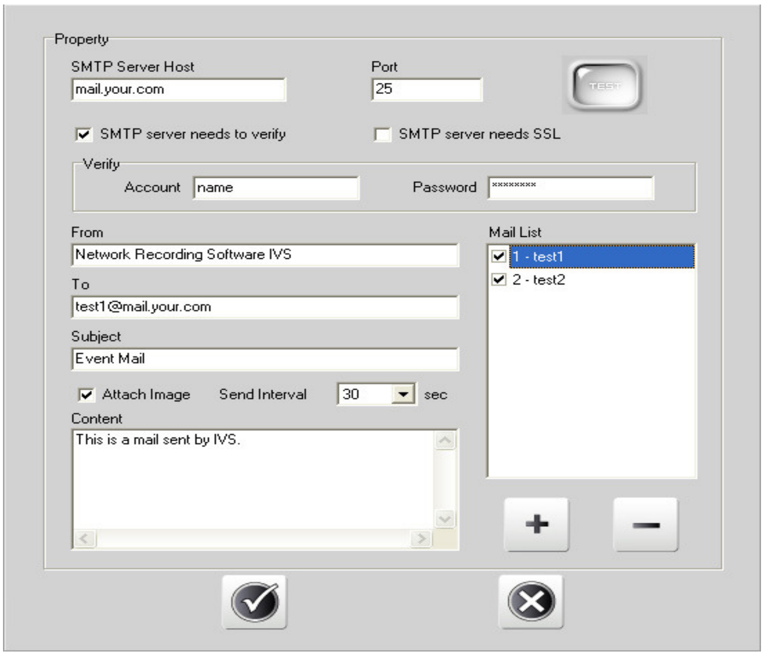
viii. Program auto-run: ☑ Auto run the program on windows startup To run the program whenever the PC is reboot.

ix. E-mail alert: When the motion is triggered, NETWORK RECORDING SOFTWARE sends the e-mail to some specific account.

a. Get into administration page. Click System.

b. Check ☑ Enable E-mail.

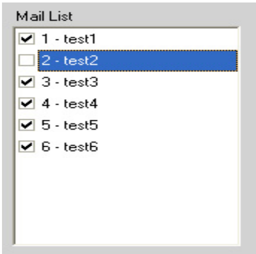
c. Click Mail to get into setup page.



1. E-MAIL setup page: To enable e-mail service, please fill in the name of SMTP server. To verify the user, please check ☑ SMTP server needs to verify, and fill in the user account and password. Click TEST to test the e-mail service.
2. The default value of "From" is auto created.
3. Please fill in the e-mail destination address such as test@mail.com
4. "Subject" and "Content" column：The title and the reminder of a triggered event.
5. Check ☑ Attach Image to attach the triggered event and image to the

pre-set e-mail address.

6. In the e-mail setup page, click [+] to add more e-mail addresses to the sending list; or click [−] to delete from the sending list.



Attention: The E-mail server will not send the e-mail and the attachment if the check box of the sending list is unchecked.

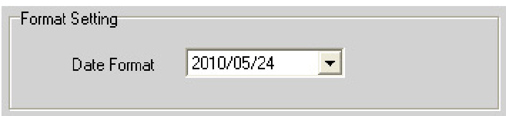
x. Auto Logout：Check [Auto Logout]，the system will automatically logout within the pre-set time [30 sec]，if there is no keyboard or mouse event detected.

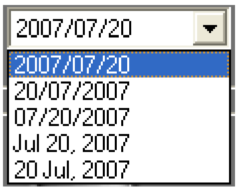
xi. HDD setup:

a. NETWORK RECORDING SOFTWARE series will overwrite the old data when the HDD is full. Click [System] to enable/ disable this function.

b. [Overwrite When Diskfull] The default configuration of this function is enable.

xii. Date Format:





a. There are 5 different date formats available .

b. Please save the changes before exiting.

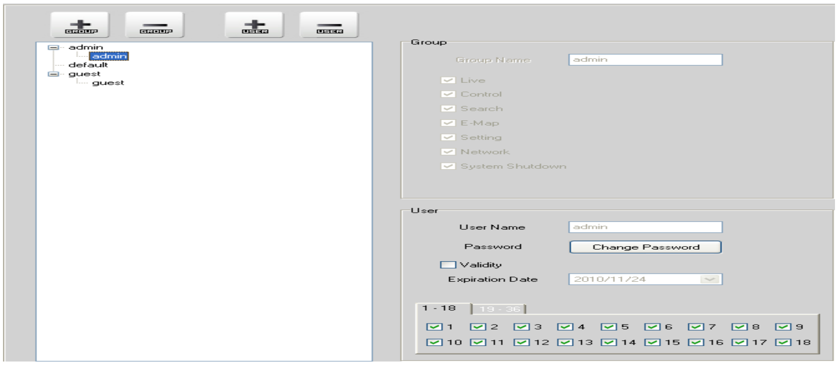
xiii. Product Information:

a. Click [About] to show product information.

H. User Management

Manager could manage the user accounts and adjust each account the privilege setting.

i. Click  to get into administration page.



There are 3 default privilege profiles of account groups:

a. **Admin**：Have privileges of all system functions and devices.

In particular, users can set the deadline privileges of other users.

b. **Default**：Have limited privileges of all system functions and completed privileges of assigned specify viewer of the camera.

c. **Guest**：All the privileges of system functions are forbidden, user could only manage assigned cameras.

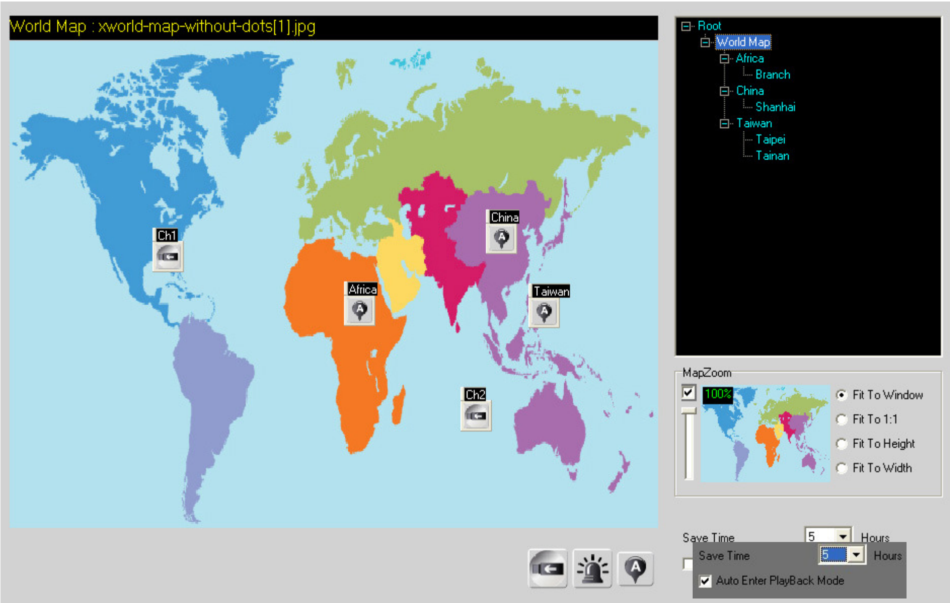
ii. On the left side of the administration page, please check the authority type, key in the “Group Name” and click  to add the new Group to the list. Click  to delete the group.

iii. On the right side of the administration page, please fill in the user name, password and select the group. Click  to add new user and click  to delete.

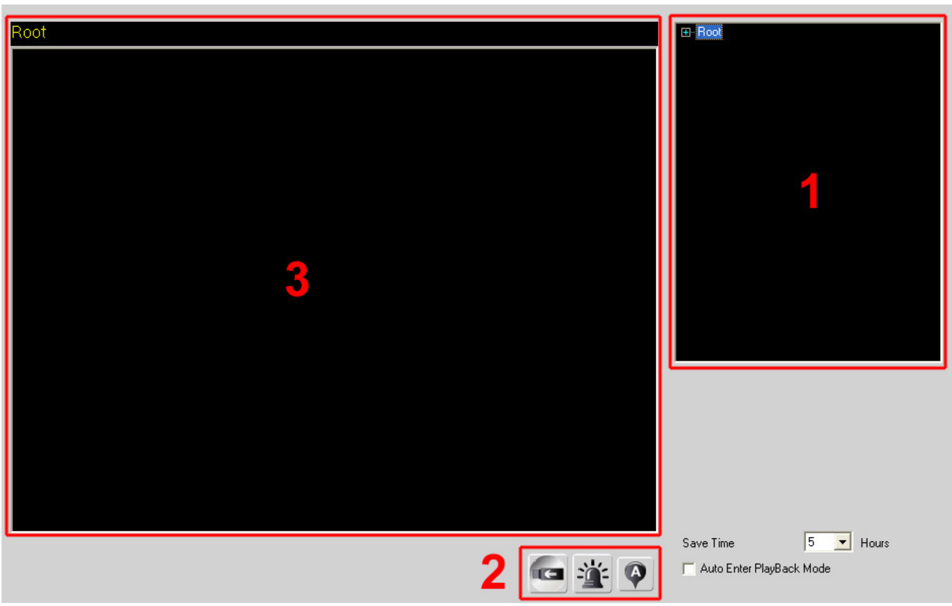
iv. After configuration, please leave the administration page. In the live-viewing page please click  to login/logout.

I. E-map setting

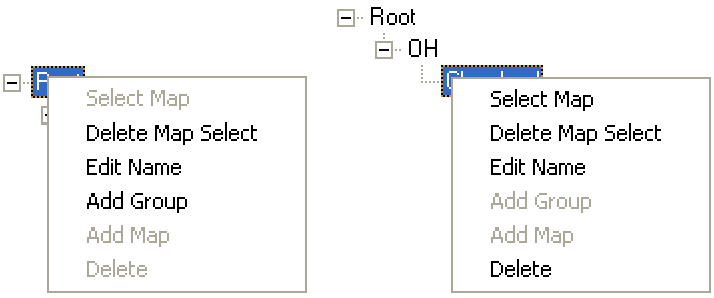
Get into administration page. Click  to set up the E-map.



In the following, the screen of E-map setting will separate into three blocks to instruction.



Block 1: User can right click the mouse to setup the map



Block 2: The icon of devices which can drag and pull to the map.

: Add the alarm in the map. Click the icon can see the live view of alarm device.

: Add the camera in the map. Click the icon can see the live view of the camera.

: Add the map in the map. Click the map icon will link to another map.

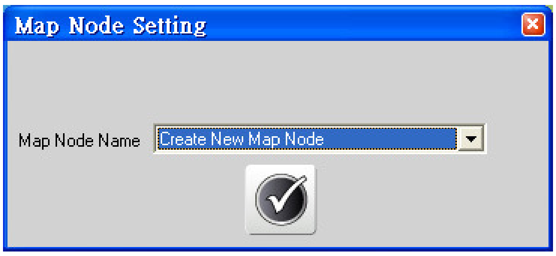
Block 3:

i. Add the E-Map

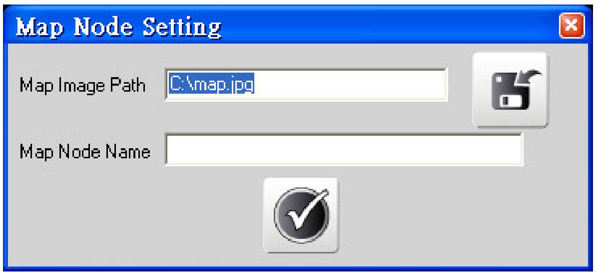
The fundamental operating steps of add a new E-Map

a. Select the Node first to add a new E-Map. Such as “Root” node in the beginning.

b. Drag and Pull  of block 2 to block 3 and the following dialogue box will pop-up.

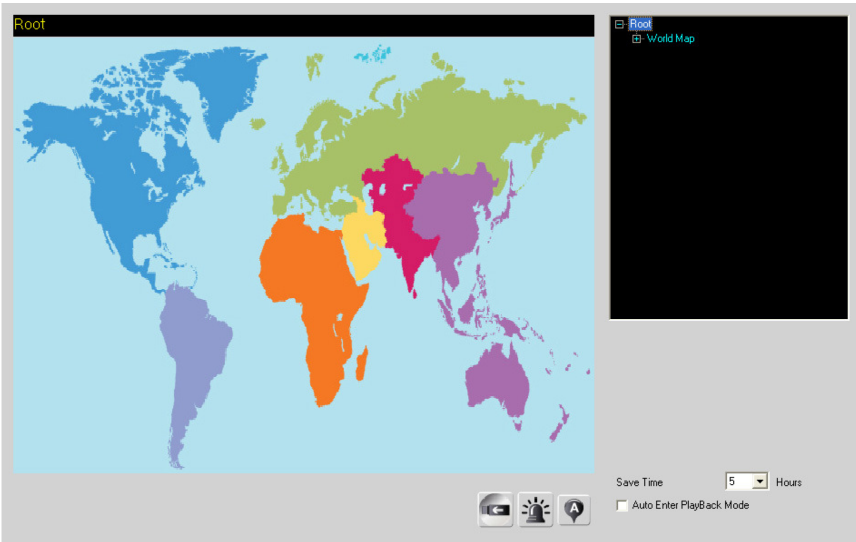


User can click  button to complete the setting or click the drop down list to select the map. After click the drop down list, then select ”Create New Map (Not Link to Existed Map)” option. The following dialogue box will pop-up.



Click  button to select the image of the map and key in the name of new map in Map Node Name input field.

Finally, click  to complete the new map setting.



ii. Add the E-Map Link

The fundamental operating steps of add the link for exist maps. (* Make sure there are more than two maps)

As the following image, there are two maps that have setup.



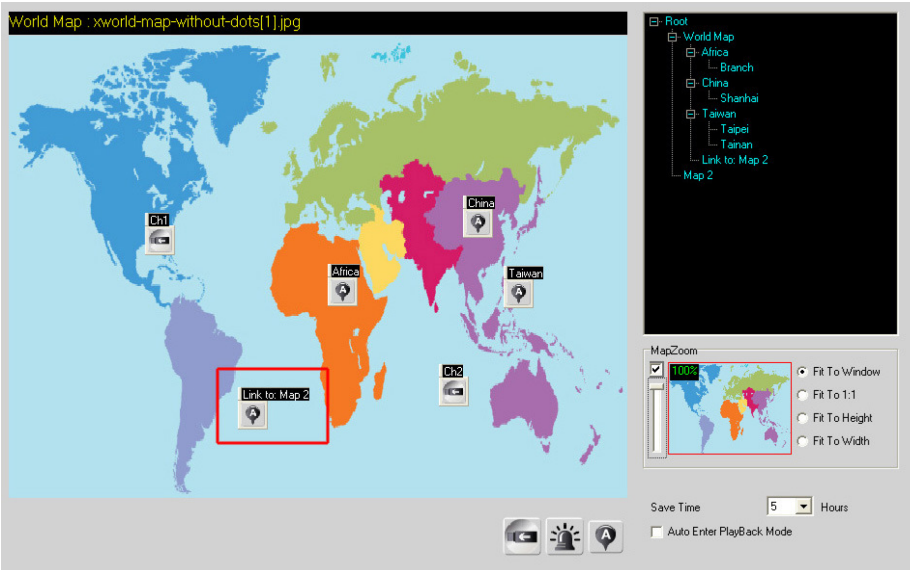
If the user wants to create a link of one map into another map, such as the link of “Map2” in “World Map” in above image, please follow the following steps.

a. Please click the map in Block 1 which wants to add the link from another map. (i.e. World Map)

b. Drag and pull the  icon form Block 2 to Block 3, and then select “Map 2” in the drop down list of Node Name.



c. Finally, click  button to complete the map setting. As the following image, there is a link of “Map2” in the “World Map”.



iii. Add the camera and the sensor

After complete the map setup, drag and pull the icon of camera and sensor ( ) to put the camera & sensor on the map. Moreover, right-click of the mouse on the camera can select the channel number. According to the NETWORK RECORDING SOFTWARE series version, there are different numbers of camera and sensor can be setup. Based on the 72 version for example, not only there are 72 cameras and sensors can be selected, but the direction of the camera can be chosen.

The fundamental operating steps of add the new camera.

a. Select the map on Block 1 first. Such as “World Map”

b. Drag and pull the icon from Block 2 to Block 3.

c. Select the channel number of the camera.

d. Moreover, select the direction of the camera

e. Finally, click the button to complete the camera setup.

The fundamental operating steps of add the new sensor.

b. Select the map on Block 1 first. Such as “World Map”

c. Drag and pull the icon from Block 2 to Block 3.

d. Select the channel number of the sensor.

e. Finally, click the button to complete the sensor setup.

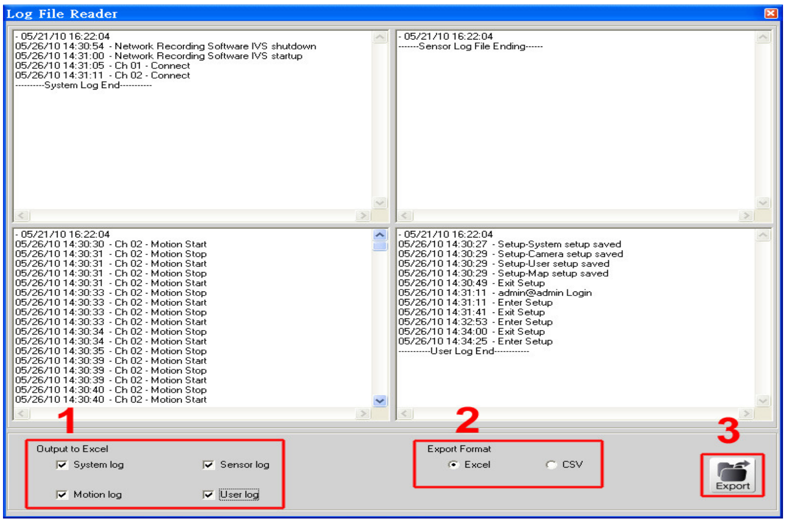
iv. Event save time setting：On the right side of the setting page Save Time 5 Hours， please determine recording time of the motion or alarm events. **There are up to 5000 events can be stored. The previous records will be over-write if exceeding 5000 records.**

v. Auto Enter Playback Mode：By enabling this function Auto Enter PlayBack Mode, when the motion and the alarm events are triggered, the system will automatically playback the event (E-MAP mode only).

vi. Click to save the configuration.

J. Log Export

Get into administration page and press  button to enter “System Setting”, then press  to export System’s Log into external files.

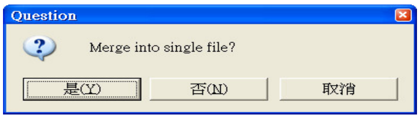


i. Select those types of logs you want to output from 4 categories: System, Motion, Sensor and User.

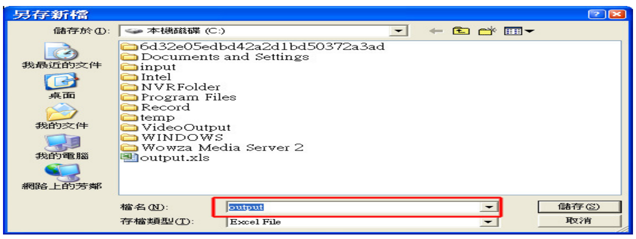
ii. Choose file format to export : “Excel” or “CSV”

iii. Press “Export” button when you are ready

iv. System will prompt a confirmation dialog to ask you whether to merge all logs into a single file or not.

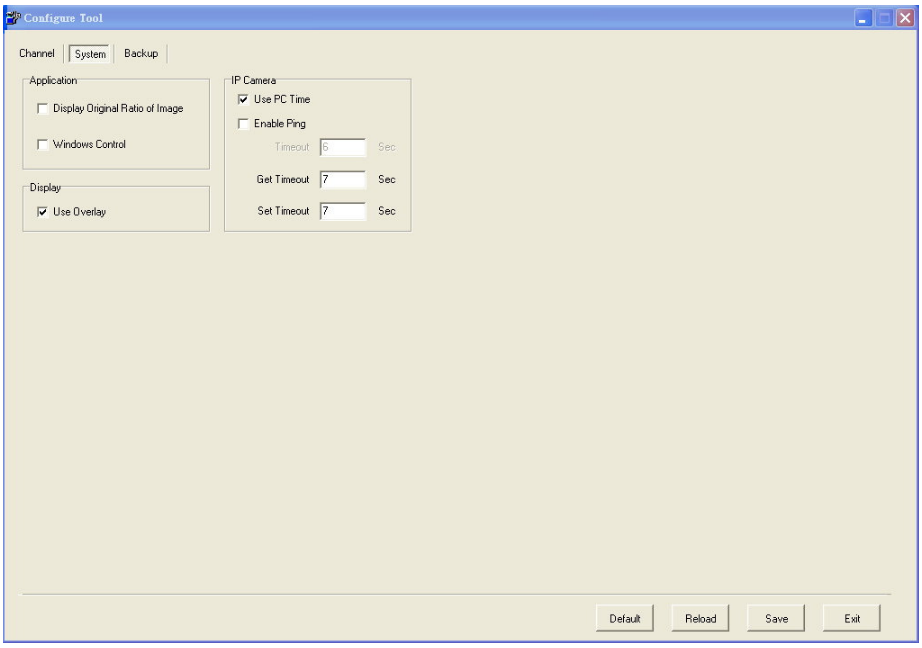


v. Please assign target filename and location to save in the file output dialog.



vi. You must install Microsoft Office software first before you can export logs into Excel files.

XIV. Configure Tool



A. Original Radio of Image (Default: off)

If the user wants to display the image in original size, please click "Display Original Radio of Image" option. While the split screen of the program does not fit with the ratio of the image, the image will be presented in original ratio size.

B. Enable/ Disable "Window Control" (Default: off)

This function is only available for resolution larger than 1024 x 768 monitor. This function can not combine with "Auto Adjust Resolution". When this function is enabled, if monitor resolution is over 1024 x 768, user is allowed to drag the window to proper position.

C. Enable/ Disable "PC Time" (Default: on)

By enabling this function, system will record the video transferring time based on the PC.

Note: By disabling this function, the recording time of the remote devices may different from the PC time.

D. Enable/ Disable "Ping" (Default: off)

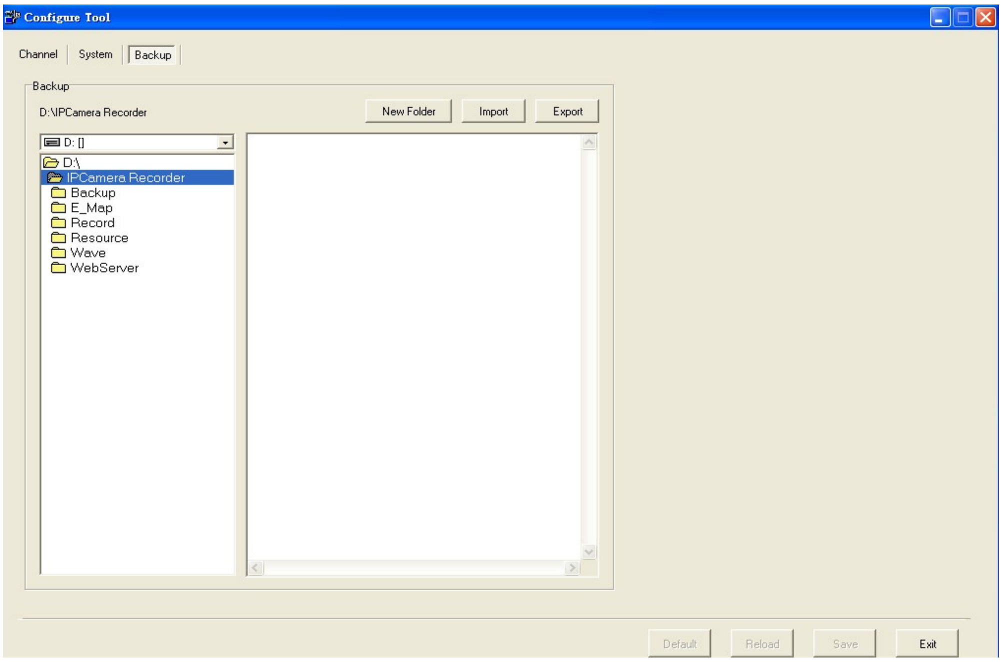
Some network device will disable the "ping" function. To connect IP camera/ video server which are protected by the firewall, please disable this function to make sure it can connect correctly.

E. Enable/ Disable "Overlay" (Default: on)

Disable the overlay function if the graphic cards don't support this function.
Note: Enabling overlay function can reduce CPU loading and enhance PC performance.

F. Backup configurations

Use Configure tool to back up all the configurations. It will be very useful to maintain the software using these configurations.



i、 Select the backup path. Click "Export".
ii、 To import the configurations into NETWORK RECORDING SOFTWARE, select the backup folder, click "Import".

XV. Product Specifications

Video Monitoring	
Channel	4CH version: 4 9CH version: 9 16CH version: 16 36CH version: 36 72CH Version: 72
Live Monitoring Mode	4CH version:1, 4 9CH version:1, 4, 9 16CH version:1, 4, 9, 16, 8, 13 36CH version: 1, 4, 9, 16, 36 72CH version: 1,4, 9, 16, NxN (25, 36, 49, 64)
Display Mode	Live View/ Playback/ Full Screen/ Loop/ E-MAP/ 10X Digital Zoom
3rd-Party Camera Support	3S, AMT-K, ACTI, Airlive, Arecont Vision, AXIS, Canon, CNet, DaHua, D-Link, DynaColor, EDIMAX, Etrovision, GE, HIKVISION, INTELLINET, iPux, IQeye, LevelOne, Linksys, Lumenera, MOBOTIX, Onvif, Panasonic, Pixord, Planet, Sanyo, SerComm, Sony, StarDot, Toshiba, Trendnet, Vivotek, Zavio
PTZ Support	Yes, Virtual PTZ Panel/Auto Pan/Preset Point/Preset Sequence/Digital PTZ
Dual-monitors	Yes, MAX.5 (Live-viewing *2)
Attached Channel Type	Yes
Channel Setup	
Record Resolutions	HD/ Mega Pixel/ D1/ CIF/ QCIF, or depends on camera
Video Quality	best, high, standard, medium, low
Show Title and Time	Yes
Recording Audio	Yes
Monition Detection	Yes
PTZ Control	Yes, via PTZ control panel
DVR Control	Yes, via DVR control panel
IO control	Yes, can activate preset alarm devices such as siren or alarm, It supports on & off switch mode and delay switch mode, up to 4 I/O Control
Digital Zoom	Yes, via digital zoom control panel
Two-way Audio	Yes
Advanced Setup	Yes. Setup Tag, Time/Date and Status location of shown channel and the font setting

System Setup	
Multi-screen	Yes, Live-viewing, Multi-Live Window, Playback Window, E-MAP
Log management	Yes, system log, alarm event, motion event, user log.
Date format	Yes, 5 Data format setting
Product information	Yes
Display setup	4CH version:1 and 4CH split window setup (Up to 10 combination) 9CH version:1,4 and 9CH split window setup (Up to 20 combination) 16CH version:1,4,8,9,13 and 16CH split window setup (Up to 30 combination) 36CH version:1,4,9 and 16CH split window setup (Up to 40 combination) 72CH version:1,4,9 and 16CH split window setup (Up to 80 combination)
Keyboard Lock	Yes
Auto Reboot by Schedule	Yes
Auto Startup	Yes
E-mail	Yes, motion and alarm trigged
Auto Logout	Yes
HDD Overwrite	Yes
Alarm Sound	Yes
Recording	
Capacity	Depends on Hard Disk
Recording Mode	Manual/ Continuous/ Scheduling/ Motion/ Event/ Alarm
Schedule Types	Manual Select/Day Mode/Hour Mode/Weekend Mode
Video Playback	
Video Search	Yes, time search
Video Export	JPG, AVI
Print Image	Yes
Video Forward/ backward	1x, 2x, 4x, 8x, 16x, 32x (depending on hardware or channel)
Video Simultaneous Playback	Yes, up to 16 channels
Smart Search	Yes, Area search、Faster video retrieval by intelligent video analytics (IVA)
Smart Search Export	AVI
Digital Zoom	Yes, by digital panel control
Time Span searching	Faster Time Span searching
Triggers & Events	
Even	Motion detection / Alarm input / Connection failure / Recording failure/ Surveillance events (Motion detection、Foreign object、Missing object、Loss

	Focus、Occlusion、Redirection、Counting、Video loss)
Event Actions	Buzzer / E-Mail / Pop up / Event notification on monitoring / FTP / Record
Event Recording	Pre/Post Event Recordings
Event warning	
On Screen Display	Yes
E-mail Warning	Yes, with event attachment
Alarm Output	when motion detected, pre-selected alarm sound will be playback and live screen will enter full screen mode
Security	
Security setup	Yes, Authority management (configure control authority of specified cameras for different users)
Online user list	Yes
Host access control (IP filter)	Yes
Hide camera during recording	Yes
Auto log off	Yes
Report	
PC Performance Real Time Resource Report	Yes
Bit Rate History Report	Yes
Counting History Report	Yes
Remote control	
Web Server	Remote connection via webpage browser
3GPP Server	Remote connection via 3G mobile phone
Remote Program Server	Remote connection via remote control software or Remote Lite program
Remote Lite export	Yes
CMS management	Yes
Configure Tool	
Hardware Auto Search	Yes
Auto Resolution Adjustment	Yes, best resolution is 1024 x 768
Window Control	Yes, resolution must above 1024 x 768
Enable Ping Function	Yes
Time Synchronization	Yes, system will record the video transferring time based on the PC.
Use Overlay	Yes
Backup Import/ Export	Yes

XVI. GRAPHIC CARD Test Table

The following list presents the graphic cards which have been tested with Network Recording Software series.

<table>
<tr><th>OS</th><th colspan="2">GRAPHIC CARD MODEL</th></tr>
<tr><td rowspan="2">Windows 2000</td><td>ATI</td><td>RADEON 7500</td></tr>
<tr><td>NVIDIA</td><td>GEFORCE 6200</td></tr>
<tr><td rowspan="2">Windows XP</td><td>ATI</td><td>RADEON 9200, RADEON 9550,
RADEON XPRESS 200, RADEON HD 3650</td></tr>
<tr><td>NVIDIA</td><td>GEFORCE 6200, GEFORCE 6600,
GEFORCE 7100, GEFORCE 7300,
GEFORCE 8500</td></tr>
<tr><td rowspan="3">Windows Vista</td><td>ATI</td><td>RADEON XPRESS 200M, RADEON HD 2400 PRO</td></tr>
<tr><td>NVIDIA</td><td>GEFORCE 8500</td></tr>
<tr><td>Intel</td><td>G33</td></tr>
<tr><td rowspan="3">Windows 7</td><td>ATI</td><td>RADEON HD3650</td></tr>
<tr><td>NVIDA</td><td>GEFORCE 7050</td></tr>
<tr><td>INTEL</td><td>G33/G31</td></tr>
</table>

NOTE 1: All the graphic cards which are shown in above table have to update their driver to the latest version. Please go to ATI, NVIDIA or Intel official website to update the driver.

NOTE 2: By using Windows Vista, due to Intel G33 Driver (Version: 7.14.10.1461) from its OEM have not supported Vista DirectX 10 yet, it cannot display the image within Overlay mode while operating Dual-Monitor. Therefore, this caused problem still wait for the solution from its OEM.